



# CA FINAL **SFM**

## THEORY BOOKLET



**CA GAURAV JAIN**

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# 11 All India Ranks & 750+ Exemptions

Nov. 2015



**Shreshtha Tayal**

**AIR 20**

Roll No. 141557

**68 Marks**

(AIR/CA/CS 20th)

May 2015



**Shailee Chaudhary**

**AIR 1**

Roll No. 130814

**88 Marks**

Nov. 2014



**Anish Gupta**

**AIR 22**

Roll No. 188172

**68 Marks**

Nov. 2015



**Payal Bansal**

**AIR 27**

Roll No. 137808

**70 Marks**

May 2014



**Pravesh Khandelwal**

**AI 2<sup>nd</sup> Highest**

Roll No. 125761

**85 Marks**

May 2017



**Naman Jain**

Roll No. 133759

**94 Marks**

Nov. 2013



**Nishant Gupta**

**AIR 17**

Roll No. 162871

**77 Marks**

Nov. 2014



**Keshav Goel**

**AIR 18**

Roll No. 132485

**83 Marks**

May 2016



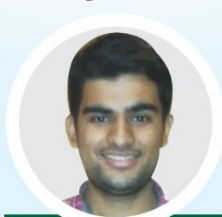
**Harsh Garg**

**AIR 17**

Roll No. 408489

**74 Marks**

May 2016



**Kunal Somani**

**AIR 14**

Roll No. 438272

**88 Marks**

May 2016



**Prashu Goyal**

**AIR 36**

Roll No. 480693

**81 Marks**



# 11 All India Ranks & 750+ Exemptions



**Lakshay Gupta**  
Roll No. 438484  
Scored 85 Marks in SFM



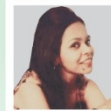
**Vinod Gupta**  
Roll No. 428103  
Scored 81 Marks in SFM



**Paras Khurana**  
Roll No. 443280  
Scored 79 Marks in SFM



**Vidhu Sah**  
Roll No. 496735  
Scored 78 Marks in SFM



**Swati Mundra**  
Roll No. 438473  
Scored 77 Marks in SFM



**Divy Sethi**  
Roll No. 496393  
Scored 77 Marks in SFM



**Ayush Agarwal**  
Roll No. 432340  
Scored 77 Marks in SFM



**Tarun Surekha**  
Roll No. 505367  
Scored 75 Marks in SFM



**Taraana Talwar**  
Roll No. 425330  
Scored 75 Marks in SFM



**Rocky Jangid**  
Roll No. 492274  
Scored 73 Marks in SFM



**Priyanka Mittal**  
Roll No. 439304  
Scored 73 Marks in SFM



**Mayank Chaudhary**  
Roll No. 431909  
Scored 73 Marks in SFM



**Ankit Jain**  
Roll No. 434716  
Scored 73 Marks in SFM



**Rashika Jain**  
Roll No. 506933  
Scored 72 Marks in SFM



**Niklesh Agarwal**  
Roll No. 439441  
Scored 71 Marks in SFM



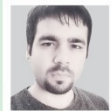
**Sejal Goel**  
Roll No. 458947  
Scored 71 Marks in SFM



**Anuskh Kapoor**  
Roll No. 437438  
Scored 71 Marks in SFM



**Deepak Singh**  
Roll No. 438660  
Scored 69 Marks in SFM



**Akhil Madaan**  
Roll No. 509731  
Scored 69 Marks in SFM



**Sumeet Jha**  
Roll No. 443674  
Scored 68 Marks in SFM



**Sameer Kapoor**  
Roll No. 443674  
Scored 68 Marks in SFM



**Madhu Pokharel**  
Roll No. 435039  
Scored 67 Marks in SFM



**Amit Kr. Keshwani**  
Roll No. 426690  
Scored 66 Marks in SFM



**Sumit Jain**  
Roll No. 439441  
Scored 65 Marks in SFM



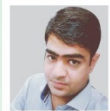
**Heena Mohla**  
Roll No. 479329  
Scored 65 Marks in SFM



**Aradhana Shankar**  
Roll No. 437452  
Scored 65 Marks in SFM



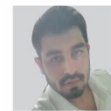
**Akshay Uppal**  
Roll No. 428968  
Scored 65 Marks in SFM



**Sumit Pandia**  
Roll No. 418602  
Scored 63 Marks in SFM



**Ankit Kumar**  
Roll No. 438304  
Scored 63 Marks in SFM



**Nishant Grover**  
Roll No. 435237  
Scored 63 Marks in SFM



**Manish Wahi**  
Roll No. 435120  
Scored 63 Marks in SFM



**Madhvi Agarwal**  
Roll No. 435120  
Scored 61 Marks in SFM



**Anurag Sehgal**  
Roll No. 496967  
Scored 61 Marks in SFM



**Parth Agarwal**  
Roll No. 481646  
Scored 60 Marks in SFM



**Abhishek Jain**  
Roll No. 430463  
Scored 60 Marks in SFM



**Ankur Ahuja**  
Roll No. 118704  
Scored 81 Marks in SFM



**Shubham Bansal**  
Roll No. 126553  
Scored 77 Marks in SFM



**Vipul Kohli**  
Roll No. 119771  
Scored 76 Marks in SFM



**Samyak Jain**  
Roll No. 117279  
Scored 75 Marks in SFM



**Nikhil Dangri**  
Roll No. 123182  
Scored 73 Marks in SFM



**Akshay Gupta**  
Roll No. 143242  
Scored 73 Marks in SFM



**Nitish Jain**  
Roll No. 127328  
Scored 72 Marks in SFM



**Divya Goel**  
Roll No. 137646  
Scored 72 Marks in SFM



**Bikash Thakur**  
Roll No. 128998  
Scored 72 Marks in SFM



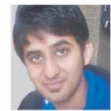
**Abhilasha Gupta**  
Roll No. 127225  
Scored 72 Marks in SFM



**Preeti Gupta**  
Roll No. 121546  
Scored 70 Marks in SFM



**Anish Munjal**  
Roll No. 121546  
Scored 70 Marks in SFM



**Mudit Goel**  
Roll No. 121971  
Scored 70 Marks in SFM



**Naman Jain**  
Roll No. 122733  
Scored 70 Marks in SFM



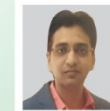
**Shweta Banger**  
Roll No. 128945  
Scored 69 Marks in SFM



**Asif**  
Roll No. 128643  
Scored 69 Marks in SFM



**Ayushi Agarwal**  
Roll No. 133383  
Scored 69 Marks in SFM



**Nitin Singhal**  
Roll No. 117341  
Scored 68 Marks in SFM



**Kapil Manchanda**  
Roll No. 181015  
Scored 68 Marks in SFM



**Arvind Kuliyal**  
Roll No. 123719  
Scored 68 Marks in SFM



**Ankur Gulati**  
Roll No. 123917  
Scored 68 Marks in SFM



**Nishant Bhardwaj**  
Roll No. 115215  
Scored 68 Marks in SFM



**Hemant Mittal**  
Roll No. 127430  
Scored 67 Marks in SFM



**Ayushi Jain**  
Roll No. 128689  
Scored 67 Marks in SFM



**Ankur Raheja**  
Roll No. 125015  
Scored 67 Marks in SFM



**Markshishir Matenja**  
Roll No. 118975  
Scored 66 Marks in SFM



**Alisha Aggarwal**  
Roll No. 128822  
Scored 65 Marks in SFM



**Pooja Gupta**  
Roll No. 120143  
Scored 64 Marks in SFM



**Tarun Mehrotra**  
Roll No. 121908  
Scored 64 Marks in SFM



**Anand Kankani**  
Roll No. 122791  
Scored 63 Marks in SFM



**Ratan Bhaduria**  
Roll No. 125331  
Scored 63 Marks in SFM



**Rohit Rathi**  
Roll No. 125331  
Scored 62 Marks in SFM



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# Best result in Delhi NCR 60+ Exemptions



**Naman Jain**  
Roll No. 133759  
Scored **94** Marks in SFM

Many congratulations to my shining Star **Naman Jain**  
for Scored **94** marks (Roll No. 133759 NRO 0336585) in CA Final SFM



**Ashish Srivastava**  
Roll No. 139873  
Scored **87** Marks in SFM



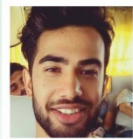
**Mandeep Sheoran**  
Roll No. 116856  
Scored **85** Marks in SFM



**Priya Mittal**  
Roll No. 143857  
Scored **81** Marks in SFM



**Vibhor Gupta**  
Roll No. 134496  
Scored **78** Marks in SFM



**Aakash Gupta**  
Roll No. 129975  
Scored **78** Marks in SFM



**Shubham Bansal**  
Roll No. 144692  
Scored **76** Marks in SFM



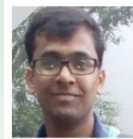
**Shishir Agarwal**  
Roll No. 134713  
Scored **76** Marks in SFM



**Rahul Kanojia**  
Roll No. 130808  
Scored **76** Marks in SFM



**Ayush Rustagi**  
Roll No. 148226  
Scored **76** Marks in SFM



**Vikalp Agarwal**  
Roll No. 182919  
Scored **75** Marks in SFM



**Vaishali Gupta**  
Roll No. 125020  
Scored **75** Marks in SFM



**Arpit Singh Chaudhary**  
Roll No. 109538  
Scored **75** Marks in SFM



**Saurabh Goswami**  
Roll No. 131998  
Scored **74** Marks in SFM



**Navdeep Rastogi**  
Roll No. 138706  
Scored **74** Marks in SFM



**Saurabh Gupta**  
Roll No. 147915  
Scored **73** Marks in SFM



**Rohit Goel**  
Roll No. 119653  
Scored **73** Marks in SFM



**Lokesh Garg**  
Roll No. 197464  
Scored **73** Marks in SFM



**Jyoti Goyal**  
Roll No. 197967  
Scored **73** Marks in SFM



**Suraj kumar**  
Roll No. 127638  
Scored **72** Marks in SFM



**Tarun Gulati**  
Roll No. 208542  
Scored **70** Marks in SFM



**Rahul Talwar**  
Roll No. 134011  
Scored **70** Marks in SFM



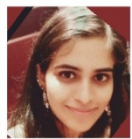
**Nitin Kumar**  
Roll No. 130158  
Scored **70** Marks in SFM



**Aakriti Jain**  
Roll No. 133732  
Scored **70** Marks in SFM



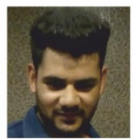
**Saurav Pandit**  
Roll No. 107206  
Scored **68** Marks in SFM



**Prachi Singh**  
Roll No. 197694  
Scored **68** Marks in SFM



**Aditya Wadhwa**  
Roll No. 143621  
Scored **68** Marks in SFM



**Dheeraj Sharma**  
Roll No. 139999  
Scored **67** Marks in SFM



**Bhuvan Grover**  
Roll No. 208068  
Scored **67** Marks in SFM



**Rajneesh Verma**  
Roll No. 193208  
Scored **65** Marks in SFM



**Divyansh Jain**  
Roll No. 168563  
Scored **65** Marks in SFM



**Anjali Asha Jain**  
Roll No. 130360  
Scored **64** Marks in SFM



**Sunil Kashyap**  
Roll No. 130446  
Scored **62** Marks in SFM



**Bhuvi Ahuja**  
Scored **60** Marks in SFM



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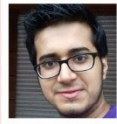
# Best result in Delhi NCR 70+ Exemptions



**Siddharth Jain**  
Roll No. 427097  
Scored 85 Marks in SFM



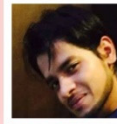
**Anushka**  
Roll No. 0  
Scored 82 Marks in SFM



**Akash Balodi**  
Roll No. 429693  
Scored 81 Marks in SFM



**Vishesh**  
Roll No. 442460  
Scored 79 Marks in SFM



**Mohit Aggarwal**  
Roll No. 426786  
Scored 79 Marks in SFM



**Prateek Mittal**  
Roll No. 442994  
Scored 78 Marks in SFM



**Bhumika Vohra**  
Roll No. 428186  
Scored 77 Marks in SFM



**Praveen Goyal**  
Roll No. 464137  
Scored 76 Marks in SFM



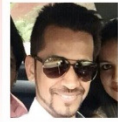
**Himanshu Khurana**  
Roll No. 442687  
Scored 75 Marks in SFM



**Ashish Kr. Shukla**  
Roll No. 426898  
Scored 75 Marks in SFM



**Neetu Rani**  
Roll No. 437454  
Scored 74 Marks in SFM



**Deepak Sardana**  
Roll No. 443510  
Scored 74 Marks in SFM



**Surmit Singh**  
Roll No. 0  
Scored 73 Marks in SFM



**Kanika Garg**  
Roll No. 433227  
Scored 73 Marks in SFM



**Samridhi Chanana**  
Roll No. 424331  
Scored 72 Marks in SFM



**Rakesh Kr. Thakur**  
Roll No. 426946  
Scored 72 Marks in SFM



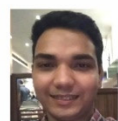
**Himanshu Aggarwal**  
Roll No. 432897  
Scored 72 Marks in SFM



**Ritu Sachdeva**  
Roll No. 427387  
Scored 71 Marks in SFM



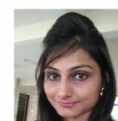
**Ritika Raheja**  
Roll No. 442437  
Scored 71 Marks in SFM



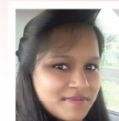
**Mohd. M. J. Ansari**  
Roll No. 443584  
Scored 71 Marks in SFM



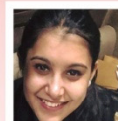
**Aayush Kr. Jain**  
Roll No. 438696  
Scored 71 Marks in SFM



**Yogita Jain**  
Roll No. 442986  
Scored 70 Marks in SFM



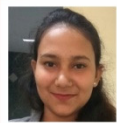
**Nidhi Kansal**  
Roll No. 444601  
Scored 70 Marks in SFM



**Harshita Monga**  
Roll No. 434152  
Scored 70 Marks in SFM



**Nitesh Kumar**  
Roll No. 438153  
Scored 69 Marks in SFM



**Zainab**  
Roll No. 437492  
Scored 66 Marks in SFM



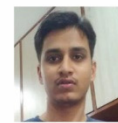
**Rohit Kumar**  
Roll No. 432384  
Scored 66 Marks in SFM



**Pridhi Khanna**  
Roll No. 442997  
Scored 66 Marks in SFM



**Monika Singh**  
Roll No. 425482  
Scored 66 Marks in SFM



**Aditya**  
Roll No. 434127  
Scored 66 Marks in SFM



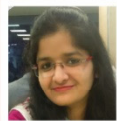
**Aakash Agarwal**  
Roll No. 444427  
Scored 66 Marks in SFM



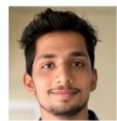
**Pankaj Gaur**  
Roll No. 442669  
Scored 65 Marks in SFM



**Tushar Agarwal**  
Roll No. 429795  
Scored 64 Marks in SFM



**Kirti Goyal**  
Roll No. 433989  
Scored 64 Marks in SFM



**Aadarsh Pratap**  
Roll No. 406363  
Scored 64 Marks in SFM



**Pooja Garg**  
Roll No. 432401  
Scored 63 Marks in SFM



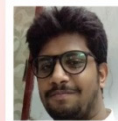
**Varun Grover**  
Roll No. 439026  
Scored 63 Marks in SFM



**Tanveer Akhtar**  
Roll No. 439038  
Scored 63 Marks in SFM



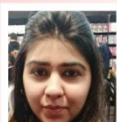
**Harshit Gupta**  
Roll No. 433051  
Scored 63 Marks in SFM



**Himanshu Garg**  
Roll No. 480402  
Scored 62 Marks in SFM



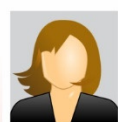
**Aditi Dadhichi**  
Roll No. 495051  
Scored 62 Marks in SFM



**Kimi Pawha**  
Roll No. 434021  
Scored 61 Marks in SFM



**Yonish Kumar**  
Roll No. 432139  
Scored 61 Marks in SFM



**Shivani Aggarwal**  
Roll No. 433594  
Scored 61 Marks in SFM



**Prateek Joshi**  
Roll No. 419092  
Scored 61 Marks in SFM



**Pallavi Singhal**  
Roll No. 424452  
Scored 61 Marks in SFM



**Gaurav Chauhan**  
Roll No. 437530  
Scored 61 Marks in SFM



**Anu Jain**  
Roll No. 436813  
Scored 61 Marks in SFM



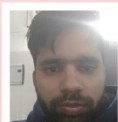
**Yashank Garg**  
Roll No. 0  
Scored 60 Marks in SFM



**Shivansh Garg**  
Roll No. 444199  
Scored 60 Marks in SFM



**Nisha Gupta**  
Roll No. 442675  
Scored 60 Marks in SFM



**Mohit Singh**  
Roll No. 438616  
Scored 60 Marks in SFM



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# Best result in Delhi NCR 50+ Exemptions



**Sumit Yadav**  
Roll No. 189797  
Scored **90** Marks in SFM



**Kashish Kalra**  
Roll No. 254642  
Scored **88** Marks in SFM



**Mehtab Hussain**  
Roll No. 251393  
Scored **86** Marks in SFM



**Anshuman Goel**  
Roll No. 251622  
Scored **82** Marks in SFM



**Vrinda**  
Roll No. 252079  
Scored **81** Marks in SFM



**Kapil Bansal**  
Roll No. 139911  
Scored **77** Marks in SFM



**Vaibhav Goel**  
Roll No. —  
Scored **77** Marks in SFM



**Babita Verma**  
Roll No. 251095  
Scored **76** Marks in SFM



**Suraj Sharma**  
Roll No. 251648  
Scored **75** Marks in SFM



**Bhavesh Singla**  
Roll No. 160679  
Scored **75** Marks in SFM



**Kuldeep Chandila**  
Roll No. 140225  
Scored **72** Marks in SFM



**Sanjeev Ranjan**  
Roll No. 131131  
Scored **72** Marks in SFM



**Kanupriya Maheshwari**  
Roll No. 251897  
Scored **72** Marks in SFM



**Dhruv Rao**  
Roll No. 140135  
Scored **71** Marks in SFM



**Raju Ranjan Bihari**  
Roll No. 124186  
Scored **70** Marks in SFM



**Anuraag Gupta**  
Roll No. 131961  
Scored **70** Marks in SFM



**Aman Mehta**  
Roll No. 131989  
Scored **69** Marks in SFM



**Aayushi Mishra**  
Roll No. 125600  
Scored **69** Marks in SFM



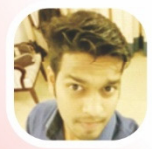
**Astha Sharma**  
Roll No. 251642  
Scored **68** Marks in SFM



**Mayur Goel**  
Roll No. 185672  
Scored **67** Marks in SFM



**Anuj Verma**  
Roll No. 251618  
Scored **66** Marks in SFM



**Manish Kumar**  
Roll No. 125238  
Scored **66** Marks in SFM



**Monika**  
Roll No. 250933  
Scored **66** Marks in SFM



**Rishu Jain**  
Roll No. 131371  
Scored **65** Marks in SFM



**Kshitij Goel**  
Roll No. 130288  
Scored **65** Marks in SFM



**Garima Nagpal**  
Roll No. 139753  
Scored **64** Marks in SFM



**Neha Chaudhary**  
Roll No. 129634  
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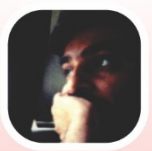
**Piyush Bhatia**  
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**Rachna Tomar**  
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**Gaurav Sharma**  
Roll No. 389995



**Himanshu Jain**  
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**Udit Kumar**  
Roll No. 328554



**Jyotsana**  
Roll No. 331581



**Ashish Shrestha**  
Roll No. 357422



**Anmol Garg**  
Roll No. 335687



**Sharvan**  
Roll No. 3801028



**Bharkha Garg**  
Roll No. 335527



**Shubham Goyal**  
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**Mohit Kapoor**  
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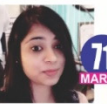
**Akshya Rastogi**  
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**Gunjan Audichya**  
Roll No. 322836



**Neelam Rohani**  
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**Aishwarya Munjal**  
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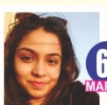
**Kavya Gupta**  
Roll No. 310092



**Somya Jain**  
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**Sopandeep**  
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**Misha Dhawan**  
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**Anshul Sharma**  
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**Alam Shekh**  
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**FINANCIAL SERVICES &  
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**Coverage**

**ICAI SM, MTP & CASE STUDIES**



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# CA-FINAL

## Paper 2

# Strategic Financial Management (SFM)

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# Financial Policy & Corporate Strategy

STUDY SESSION 1

Financial Policy &amp; Corporate Strategy

## Question 1 :

Write a Short note on Strategic Financial Decision-Making Framework.

### Answer :

- Capital investment is the springboard for wealth creation.
- The satisfaction of the interests of the shareholders should be perceived to an end, namely maximization of shareholders' wealth.
- Since capital is the limiting factor, all businesses need to have the following three fundamental essential elements.
  - A clear and realistic strategy
  - The financial resources, controls and systems to see it through.
  - The right management team and processes to make it happen.

Strategy + Finance + Management = Fundamentals of Business

## Question 2 :

Write a short note on Functions of Strategic Financial Management.

### Answer :

- Strategic Financial Management is the portfolio constituent of the corporate strategic plan—that embraces the optimum investment and financing decisions required to attain the overall specified objectives.
- In this connection, it is necessary to distinguish between strategic, tactical and operational financial planning. While **strategy** is a long-term course of action, tactics are intermediate plan, while **operational** are short-term functions.
- Irrespective of the time horizon, the investment and financial decisions functions involve the following functions.
  - Continual search for best investment opportunities;
  - Selection of the best profitable opportunities;





- Determination of optimal mix of funds for the opportunities;
- Establishment of systems for internal controls; and
- Analysis of results for future decision-making

### Question 3 :

What are the key decisions falling within the scope of financial strategy?

(MTP Oct 19, Nov 19 suggested)

OR

Write a Short note on Agency Theory.

Answer :

Financing decisions – the mode of financing or mix of equity capital and debt capital.

Investment decisions – profitable utilization of firm's funds especially in long-term projects

Dividend decisions – determine the division of earnings between payments to shareholders and reinvestment in the company.

Portfolio decisions – involve evaluation of investments based on their contribution to the aggregate performance of the entire corporation rather than on the isolated characteristics of the investments themselves.

### Question 4 :

Write a short note on "Strategy at Different Hierarchy Levels".

Answer :

#### 1. Corporate Level Strategy

Corporate level strategy should be able to answer three basic questions:

Suitability – Whether the strategy would work for the accomplishment of common objective of the company.

Feasibility – Determines the kind and number of resources required to formulate and implement the strategy.

Acceptability – It is concerned with the stakeholders' satisfaction and can be financial and non-financial.





## 2. Business Unit Level Strategy

- Strategic business unit (SBU) may be any profit centre that can be planned independently from the other business units of a corporation.
- At the business unit level, the strategic issues are about practical coordination of operating units and developing and sustaining a competitive advantage for the products and services that are produced.

## 3. Functional Level Strategy

- The functional level is the level of the operating divisions and departments.
- Functional level strategies involve the development and coordination of resources through which business unit level strategies.
- such as providing information on customer feedback or on resources and capabilities on which the higher-level strategies can be based.
- Once the higher-level strategy is developed, the functional units translate them into discrete action plans that each department or division must accomplish for the strategy to succeed.

### Question 5 :

Write a short note on Financial Planning.

Answer :

- Financial planning is a systematic approach whereby the financial planner helps the customer to maximize his existing financial resources by utilizing financial tools to achieve his financial goals.

There are 3 major components of Financial planning:

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

Financial Planning = FR + FT + FG

- Outcomes of the financial planning are the financial objectives, financial decision-making and financial measures for the evaluation of the corporate performance.



- *Financial objectives* are to be decided at the very outset so that rest of the decisions can be taken accordingly.
- The *financial measures* like ratio analysis, analysis of cash flow statement is used to evaluate the performance of the Company.

**Question 6 :**

**Explain the Interface Of Financial Policy And Strategic Management.**

**Answer :**

- Starting point of an organization is *money* and the end point of that organization is also money.
- *Sources of finance and capital structure* are the most important dimensions of a strategic plan.
- Organizations may offer higher *rates of interest* than banking institutions to attract investors and raise fund.
- Another important dimension of strategic management and financial policy interface is the *investment and fund allocation decisions*.
- *Dividend policy* is yet another area for making financial policy decisions affecting the strategic performance of the company. It also gives a message of lesser risk for the investors.

The financial policy of a company *cannot be worked out in isolation* of other functional policies.

**Question 7 :**

**Explain briefly, how financial policy is linked to Strategic Management?**

**Answer :**

- The success of any business is measured in financial terms. Maximising value to the shareholders is the ultimate objective. For this to happen, at every stage of its operations including policymaking, the firm should be taking strategic steps with value-maximization objective. This is the basis of financial policy being linked to strategic management.
- The linkage can be clearly seen in respect of many business decisions. For example:



- (i) Manner of *raising capital* as source of finance and capital structure are the most important dimensions of strategic plan.
  - (ii) *Cut-off rate* (opportunity cost of capital) for acceptance of investment decisions.
  - (iii) *Investment and fund allocation* is another important dimension of interface of strategic management and financial policy.
  - (iv) *Foreign Exchange exposure and risk management*.
  - (v) *Liquidity management*
  - (vi) A *dividend policy decision* deals with the extent of earnings to be distributed and a close interface is needed to frame the policy so that the policy should be beneficial for all.
  - (vii) Issue of *bonus share* is another dimension involving the strategic decision.
- Thus, from above discussions it can be said that financial policy of a company cannot be worked out in isolation to other functional policies. It has a wider appeal and closer link with the overall organizational performance and direction of growth.

### Question 8 :

Discuss the importance of strategic management in today's scenario?

### Answer :

- Strategic management intends to run an organization in a *systematized fashion* by developing a series of plans and policies.
- It is a systems approach, which is concerned with *where the organization wants to reach and how* the organization proposes to reach that position.
- It is therefore necessary for an organization interested in long run survival and command over the market, to go for strategic planning and the planning process must be *holistic, periodic, futuristic, intellectual and creative* with emphasis given on critical resources of the firm otherwise, the organization will fall in the traps of tunnelled and myopic vision.



**Question 9 :**

*Discuss on Balancing Financial Goals Vis-A-Vis Sustainable Growth.*

(MTP Apr -19, MTP Aug 18, RTP May 20).

OR

*"Sustainable growth is important to enterprise long-term development". Explain this statement in context of planning healthy corporate growth.*

(MTP Oct 20).

**Answer :**

- Sustainable growth can be helpful for planning healthy corporate growth.
- Incremental growth strategy, profit strategy and pause strategy are other variants of stable growth strategy.
- It is important to enterprise long-term development. Too fast or too slow growth will go against enterprise growth and development.
- The sustainable growth rate is a measure of how much a firm can grow without borrowing more money.

What makes an organisation financially sustainable?

To be financially sustainable, an organisation must:

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

$SGR = ROE \times (1 - \text{Dividend payment ratio})$

Sustainable growth models assume that the business wants to:

- maintain a target capital structure without issuing new equity.
- maintain a target dividend payment ratio.
- increase sales as rapidly as market conditions allow.





What makes an organisation sustainable?

In order to be sustainable, an organisation must

- have a clear strategic direction
- be able to scan its environment or context to identify opportunities for its work
- be able to attract, manage and retain competent staff
- have an adequate administrative and financial infrastructure
- be able to demonstrate its effectiveness and impact in order to leverage further resources
- get community support for, and involvement in its work

**Question 10 :**

**Discuss the methods of valuation in brief?**

**Answer :**

- Valuation Method :** Valuation method depends on demand curve approach by either making use of expressed preferences or making use of revealed preferences.
- Pricing Method :** Pricing method is a non-demand curve approach that takes into consideration either opportunity costs or alternative costs or shadow projects or government payments or those response methods depending on the nature of the problem and environmental situation.

*Valuation methods are in general more complex in implementation than pricing methods. But demand curve methods are more useful for cases where it seems likely that disparity between price and value is high.*



NOTES

Financial Policy & Corporate Strategy







# Risk Management

## STUDY SESSION 2

### Question 1 :

What are the Types Of Risk Faced By An Organization.

OR

Explain how Financial Risk can be viewed from different view points

(MTP May 20, RTP Nov 20)

### Answer :

Organization faces many types of risks:

#### 1. Strategic Risk

Strategic risk is a risk in which a company's strategy becomes less effective and it struggles to achieve its goal.

#### 2. Compliance Risk

If the company fails to comply with laws related to a new area or industry or sector, it will pose a serious threat to its survival.

#### 3. Operational Risk

Relates to failure on the part of the company to cope with day-to-day operational problems. Operational risk relates to 'people' as well as 'process'.

#### 4. Finance Risk

Unexpected changes in financial conditions such as prices, exchange rate, Credit rating, and interest rate etc.

Financial Risk can be divided into following categories:

4.1 Counter Party Risk – risk occurs due to non-honouring of obligations by the counter party

4.2 Political Risk – Generally this type of risk is faced by and overseas investors, this can be on any of the following form:

- Confiscation or destruction of overseas properties.
- Rationing of remittance to home country.





- Restriction on conversion of local currency of host country into foreign currency.
- Restriction as to borrowings.
- Invalidation of Patents
- Price control of products

4.3 **Interest Rate Risk** – risk occurs due to **change in interest rate** resulting in change in asset and liabilities

4.4 **Currency Risk** – dealing with foreign exchange as their cash flows **changes with the movement in the currency exchange rates**

4.5 **Liquidity Risk** – liquidity risk can be defined as **inability of organization to meet it liabilities whenever they become due.**

**Question 2 :**

**Evaluation of Financial Risk.**

OR

**The Financial Risk can be viewed from different perspective Explain this statement.**

(MTP Oct 2018, MTP March 18, Nov 18 Suggested)

**Answer :**

- a) **From stakeholder's point of view** – Major stakeholders of a business are equity shareholders and they view financial gearing.
- b) **From Company's point of view** – if a company **borrowes** excessively or lend to someone who defaults, then it can be forced to go into liquidation.
- c) **From Government's point of view** – the financial risk can be viewed as **failure of any bank or down grading of any financial institution.**

**Question 3 :**

**Define Value-At-Risk (Var).**

(RTP May 20).

**Answer :**

- **VAR** is a measure of risk of investment





- Given the normal market condition in a *set of period*, say, one day it estimates how much an investment might lose.
- VAR answers two basic questions
  - What is *worst case scenario*?
  - What will be *loss*?

**Question 4 :**

Explain the features of Value-at-Risk (VAR).

(MTP Aug 18, MTP Apr 18, RTP May 20).

**Answer :**

- **Components of Calculations** – Time Period, Confidence Level – Generally 95% and 99% & Loss in percentage or in amount
- **Statistical Method** – It is a type of statistical tool based on Standard Deviation.
- **Time Horizon** – VAR can be applied for different time horizons say one day, one week, one month and so on.
- **Probability** – Assuming the values are normally attributed, probability of maximum loss can be predicted.
- **Risk Control** – Risk can be controlled by setting limits for maximum loss.
- **Z Score** – Z Score indicates how many standard Deviations is away from Mean value of a population.

**Question 5 :**

List down main Application of VAR.

(May 19 Suggested).

**Answer :**

VAR can be applied:

- (a) to measure the *maximum possible loss* on any portfolio or a trading position.
- (b) as a *benchmark for performance measurement* of any operation or trading.
- (c) to fix limits for individuals dealing in front office of a treasury department.





- (d) to enable the management to decide the trading strategies.  
 (e) as a tool for Asset and Liability Management, especially in banks.

Risk Management

**Question 6 :**

What are the Appropriate Methods for Identification And Management Of Financial Risk?

OR

Briefly explain Counter Party Risk and the various techniques to manage this risk.

(MTP Oct 19)

OR

Explain some of the parameters to identify the currency risk.

(MTP Oct 19, RTP Nov 19)

**Answer :**

### 1. Counter Party Risk

The various hints that may provide counter party risk are as follows:

- (a) Failure to obtain necessary resources to complete the project or transaction undertaken.
- (b) Any regulatory restrictions from the Government.
- (c) Hostile action of foreign government.
- (d) Let down by third party.
- (e) Have become insolvent.

The various techniques to manage this type of risk are as follows:

- (1) Carrying out Due Diligence before dealing with any third party.
- (2) Do not over commit to a single entity or group or connected entities.
- (3) Know your exposure limits.
- (4) Review the limits and procedure for credit approval regularly.
- (5) Rapid action in the event of any likelihood of defaults.
- (6) Use of performance guarantee, insurance, or other instruments.

### 2. Political risk

From the following actions by the Governments of the host country this risk can be identified:

1. Insistence on resident investors or labour.





2. Restriction on conversion of currency.
3. Expropriation of foreign assets by the local govt.
4. Price fixation of the products.

Since this risk mainly relates to investments in foreign country, company should assess country risk:

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

Further, following techniques can be used to mitigate this risk.

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

### 3. Interest Rate Risk

Generally, interest rate Risk is mainly identified from the following:

1. Monetary Policy of the Government.
2. Any action by Government such as demonetization etc.
3. Economic Growth
4. Release of Industrial Data
5. Investment by foreign investors
6. Stock market changes

### 4. Currency Risk

- Government Action
- Nominal Interest Rate
- Inflation Rate
- Natural Calamities
- War, Coup, Rebellion etc
- Change of Government.

**Question 7 :**

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

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

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

**Required:**

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

(MTP Oct 20)

**Answer :**

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

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

- (1) **Currency Risk:** Since most of the Receipts and Payments of TRC are denominated in Non-INR currencies it is exposed to Currency Risk.
- (2) **Commodity Risk:** As major constituents of production of TRC are commodities such copper, aluminum etc. it is subject to Commodity Risk.
- (3) **Interest Rate Risk:** As TRC borrows and invest money in short-term instruments it is exposed to Interest Rate Risk.





- (4) Counter Party Risk: Due to relaxation of norms for granting credits certainly the receivable amount must have increased resulting in increased in Credit Risk.
- (5) Liquidity Risk: Since for short-term funding requirements TRC is using Commercial Papers etc. they are exposed to Liquidity Risk as in time of need if funds are not available from these sources then securities shall be sold at discounted price.
- (6) Political Risk: As TRC is operating in various other countries it is also exposed to Political Risks such as Restriction on Conversion of local earnings into foreign currency, restrictions on remittance etc.
- (ii) Settlement Risk: The use of OTC Derivatives by TRC also expose it to the settlement risk as the parties with whom it has entered into the contract may not honour the same.





NOTES

Risk Management







# Security Analysis

STUDY SESSION 3

Security Analysis

Question 1 :

What is Fundamental Analysis?

Answer :

- Fundamental Analysis is based on the assumption that the share prices depend upon the future dividends expected by the shareholders.
- The present value of the future dividends can be calculated by discounting the cash flows at an appropriate discount rate and is known as the 'intrinsic value of the share'.
- The intrinsic value of a share, according to a fundamental analyst, depicts the true value of a share.
- A share that is priced below the intrinsic value must be bought, while a share quoting above the intrinsic value must be sold.

Decision To Be Taken By Fundamental Analysts

- If the prevailing price or the P/E multiple of a security is higher than the estimated fundamental value, the security is overpriced, the decision in such case will be to sell such security.
- If the prevailing price or the P/E multiple of a security is lesser than the estimated fundamental value, the security is under-priced, the decision in such case will be to buy such security.

Question 2 :

What are the key variables that an investor must monitor in order to carry out his Fundamental analysis?

OR

Discuss the Factors Affecting Economic Analysis.

(RTP May 20)

Or





Discuss the Various Techniques Used in Economic Analysis.

(MTP Oct 19, MTP Apr - 19)

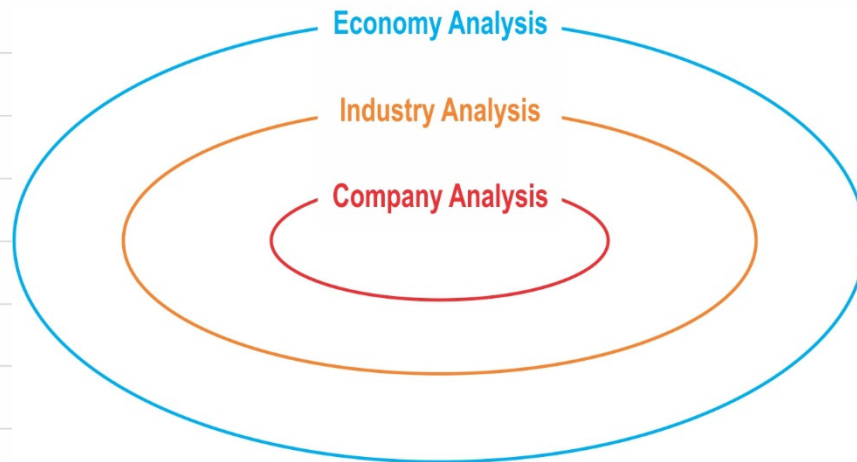
Or

Security Analysis

Explain the Factors Affecting Industry Analysis.

(RTP May 2019)

Answer :



### 1. Economic Analysis

Macro-economic factors e.g. historical performance of the economy in the past/ present and expectations in future, growth of different sectors of the economy in future with signs of stagnation/degradation at present to be assessed while analyzing the overall economy.

#### Factors Affecting Economic Analysis

- Growth Rates of National Income and Related Measures – The estimated growth rate of the economy would be a pointer to the prospects for the industrial sector, and therefore to the returns investors can expect from investment in shares.
- Growth Rates of Industrial Sector – The growth rates in various industries are estimated based on the estimated demand for its products.
- Inflation – Inflation is measured in terms of either wholesale prices or retail prices
- Monsoon – Because of the strong forward and backward linkages, monsoon is of great concern to investors in the stock market too







### Techniques Used in Economic Analysis

Anticipatory Surveys – help investors to form an opinion about the future state of the economy.

In spite of valuable inputs available through this method, it has certain drawbacks

- Survey results do *not* guarantee
- They are *not* regarded as forecasts per se, as there can be a consensus approach by the investor for exercising his opinion.

Continuous monitoring of this practice is called for to make this technique popular

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

- Leading Indicators – They lead the economic activity in terms of their outcome
- Roughly Coincidental Indicators – They reach their peaks and troughs at approximately the same in the economy.
- Lagging Indicators – They are time series data of variables that lag behind in their consequences vis-a-vis the economy
- Economic Model Building Approach – a precise and clear relationship between dependent and independent variables is determined. The steps used are as follows
- Hypothesize total economic demand by measuring total income (GNP)
- Forecasting the GNP by estimating levels of various components
- After forecasting individual components of GNP, add them up to obtain the forecasted GNP.
- Comparison is made of total GNP thus arrived at with that from an independent agency

### 2. Industry Analysis

An assessment has to be made regarding all the conditions and factors relating to demand of the particular product, cost structure of the industry and other economic and Government constraints on the same.

### Factors Affecting Industry Analysis

- Product Life-Cycle – high profitability in the initial and growth stages, medium but steady profitability in the maturity stage and a sharp decline in profitability in the last stage of growth





- Demand Supply Gap – Excess supply reduces the profitability, insufficient supply tends to improve the profitability
- Barriers to Entry – The potential entrants to the industry, however, face different types of barriers to entry
- Government Attitude – The attitude of the government towards an industry is a crucial determinant of its prospects.
- State of Competition in the Industry – firms with leadership capability, type of products, demand prospects, type of industry the firm, growth, cyclical, defensive or decline
- Cost Conditions and Profitability – Profitability depends on the state of competition in the industry, cost control measures adopted by its units and growth in demand for its products., Factors to be considered are
  - Cost allocation among various heads
  - Product price.
  - Production capacity in terms of installation, idle and operating
  - Level of capital expenditure required
- Technology and Research – Industries which update themselves have a competitive advantage over others in terms of quality, price etc. Things to be probed in this regard are:
  - Nature and type of technology used
  - Expected changes in technology for new products leading to increase in sales.
  - Relationship of capital expenditure and sales over time
  - Money spent in research and development
  - Assessment of industry in terms of sales and profitability

### Techniques Used in Industry Analysis

The techniques used for analyzing the industry wide factors are:

#### Regression Analysis -

- Investor diagnoses the factors determining the demand for output of the industry through product demand analysis



- Factors to be considered are GNP, disposable income, per capita consumption / income, price elasticity of demand.
- For identifying factors affecting demand, statistical techniques like regression analysis and correlation are used.

### Input - Output Analysis -

- It reflects the flow of goods and services through the economy, intermediate steps in production process as goods proceed from raw material stage through final consumption.
- This is carried out to detect changing patterns/trends indicating growth/decline of industries.

### 3. Company Analysis

- a) Net Worth and Book Value
- b) Sources and Uses of Funds
- c) Cross-Sectional and Time Series Analysis
- d) Size and Ranking
- e) Growth Record
- f) Financial Analysis
- g) Competitive Advantage
- h) Quality of Management
- i) Corporate Governance
- j) Regulation
- k) Location and Labour-Management Relations
- l) Pattern of Existing Stock Holding
- m) Marketability of the Shares

### Techniques Used in Company Analysis

- Correlation & Regression Analysis - Simple regression is used when inter relationship covers two variables. For more than two variables, multiple regression analysis is followed
- Trend Analysis - The relationship of one variable is tested over time using regression analysis. It gives an insight to the historical behaviour of the variable



- Decision Tree Analysis – Information relating to the probability of occurrence of the forecasted value is considered useful. A range of values of the variable with probabilities of occurrence of each value is taken up.

### Question 3 :

Write a Short note on **TECHNICAL ANALYSIS?**

Answer :

#### Meaning

- Technical Analysis is a method of share price movements based on a study of price graphs or charts on the assumption that share price trends are repetitive,
- The technical analyst is concerned with the fundamental strength or weakness of a company or an industry; he studies investor and price behaviour
- A technical analyst attempts to answer two basic questions
  - Is there a discernible trend in the prices?
  - If there is, then are there indications that the trend would reverse?

#### Assumptions

- Market value of stock depends on the supply and demand
- Supply and demand are actually governed by several factors which can be rational or irrational.
- Stock prices generally move in trends which continue for a substantial period of time.
- Technical analysis relies upon chart analysis which shows the past trends in stock prices

#### Principles of Technical Analysis

- The Market Discounts Everything – technical analysts generally have the view that a company's share price includes everything including the fundamentals of a company
- Price Moves in Trends – stock price is more likely to continue a past trend than move in a different direction.
- History Tends to Repeat Itself – Technical analysis uses chart patterns to analyze subsequent market movements to understand trends.





Question 4 :

Explain Theories of Technical Analysis.

OR

Explain The Dow Theory.

(MTP Oct 2018, MTP March 18)

OR

Explain Random Walk Theory.

(MTP Apr 18)

Answer :

### Dow Theory

- Helpful tool for determining the *relative strength* of the stock market.
- The movements of the market are divided into three classifications, all going at the same time
  - *Primary movement* is the main trend of the market, which lasts from *one year to 36 months* or longer
  - *Secondary movement* of the market is shorter in duration than the primary movement, and is opposite in direction. It lasts from *two weeks to a month* or more
  - *Daily fluctuations* are the narrow movements from *day-to-day*
- Dow Theory's purpose is to determine *where the market is and where is it going*, although not how far or high
- Primary uptrend would have three moves up
  - First one being caused by accumulation of shares by the *far-sighted, knowledgeable investors*
  - Second move would be caused by the arrival of the first reports of good earnings by corporations
  - Third stage would also see rampant *speculation* in the market.

### Elliot Wave Theory

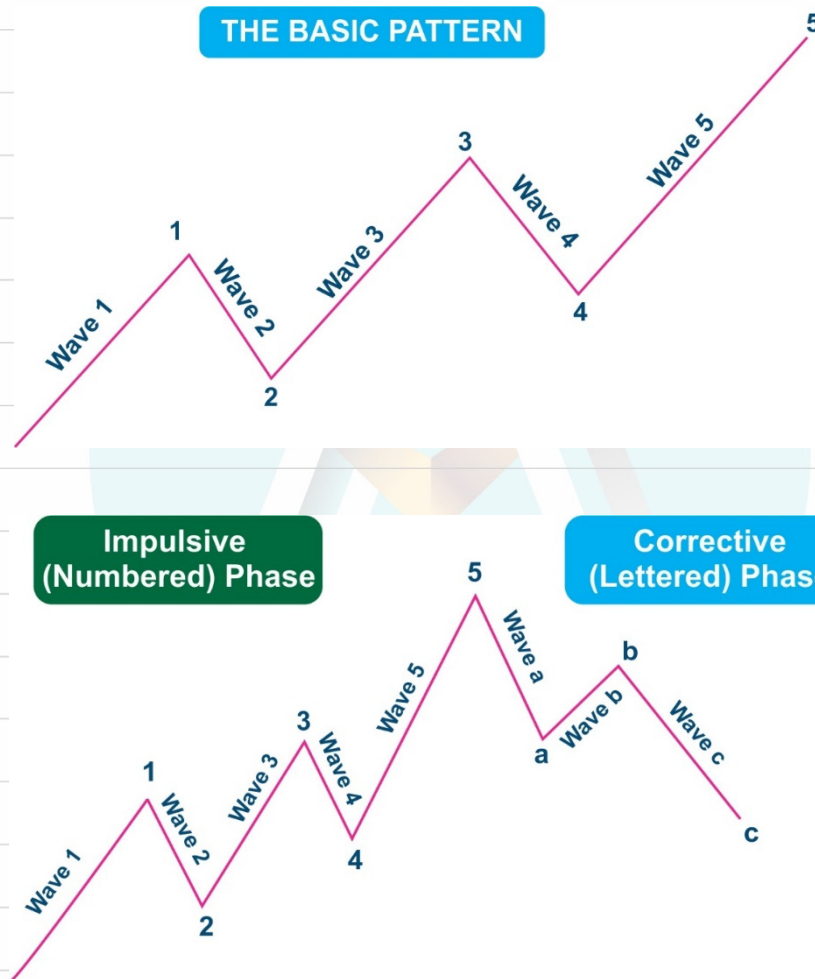
- This theory was based on *analysis of 75 years stock price movements and charts*.
- Markets exhibited certain *repeated patterns or waves*







- As per this theory wave is a movement of the market price from one change in the direction to the next change in the same direction.
- As per this theory, waves can be classified into two parts
  - Impulsive Patterns-(Basic Waves) - In this pattern there will be 3 or 5 waves in a given direction
  - Corrective Patterns- (Reaction Waves) - These 3 waves are against the basic direction of the basic movement.



### Random Walk Theory

- Market prices can be predicted if their patterns can be properly understood
- Many investment managers and stock market analysts believe that stock market prices can never be predicted because they are not a result of any underlying factors but are mere statistical ups and downs.



- Random Walk hypothesis which states that the behaviour of stock market prices is unpredictable and that there is no relationship between the present prices of the shares and their future prices.
- The supporters of this theory put out a simple argument. It follows that
  - Prices of shares in stock market can never be predicted
  - The reason is that the price trends are not the result of any underlying factors, but that they represent a statistical expression of past data
  - There may be periodical ups or downs in share prices, but no connection can be established between two successive peaks

### Question 5 :

What are the charts used by Technical Analysis?

Answer :

Line Chart – In a line chart, lines are used to connect successive day's prices. The closing price for each period is plotted as a point. These points are joined by a line to form the chart. The period may be a day, a week or a month

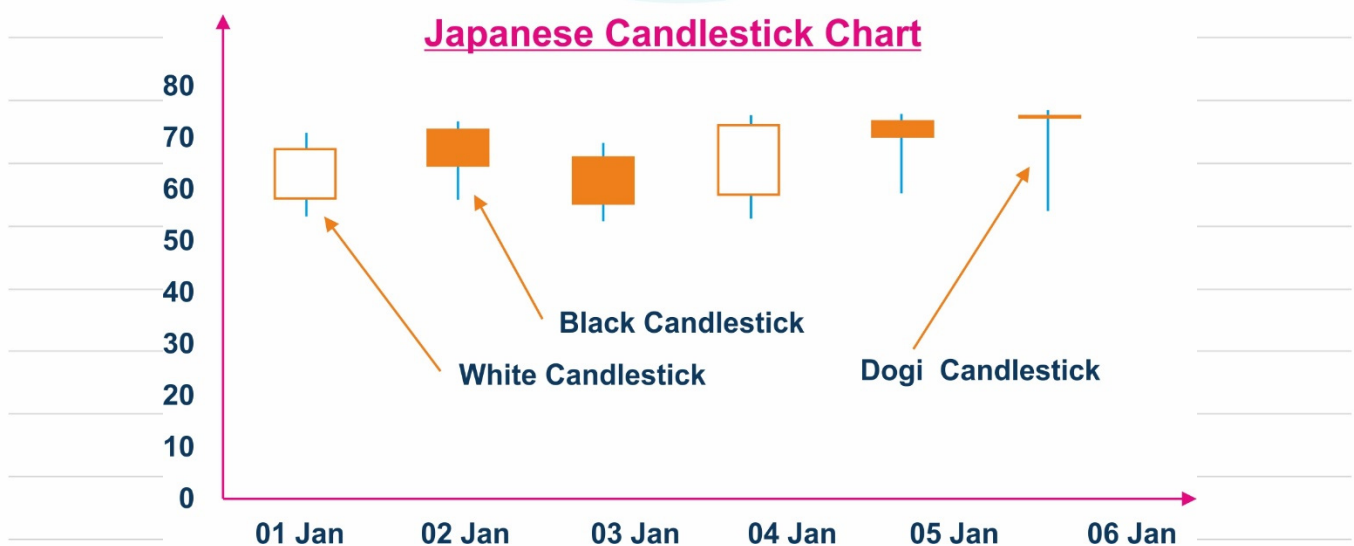


Bar Chart – a vertical line (Bar) represents the lowest to the highest price, with a short horizontal line protruding from the bar representing both the opening and closing prices for the period



### Japanese Candlestick Chart -

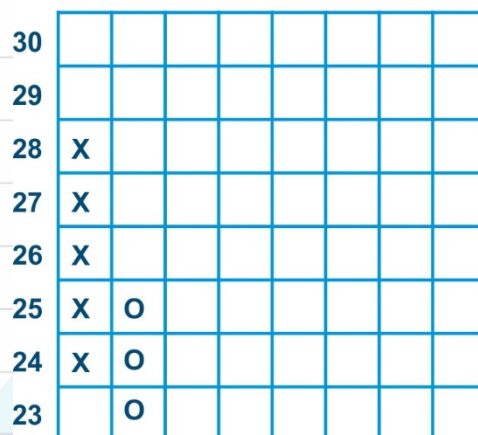
- This chart *more visualizes* the trend as change in the opening and closing prices is indicated by the colour of the candlestick
- While *Black* candlestick indicates closing price is lower than the opening price the *white* candlestick indicates its opposite
- *White* Candlestick indicates a *Bullish* trend and a *black* Candlestick indicates a *bearish* trend.
- The lowest and highest prices are indicated by vertical bar and opening and closing prices are shown in the form of rectangular (as per above-mentioned colour scheme) placed in between this bar.





Point and Figure Chart – Point and Figure charts are more complex than line or bar charts. They are used to detect reversals in a trend. For plotting a point and figure chart, we have to first decide the box size and the reversal criterion. The box size is the value of each box on the chart

Point and Figure Chart



Question 6 :

Explain Various Market Indicators?

(MTP Oct 20, RTP Nov 20)

Answer :

Breadth Index -

- Covers all securities traded
- Computed by dividing the net advances or declines in the market by the number of issues traded
- The breadth index either supports or contradicts the movement of the Dow Jones Averages
- If it supports the movement of the Dow Jones Averages, this is considered sign of technical strength and if it does not support the averages, it is a sign of technical weakness

Volume of Transactions -

- Rising index/price with increasing volume would signal buy behaviour
- Falling market with increasing volume signals a bear market and the prices would be expected to fall further



### Confidence Index -

- It is supposed to reveal how willing the investors are to take a chance in the market.
- It is the ratio of high-grade bond yields to low-grade bond yields
- A rising confidence index is expected to precede a rising stock market, and a fall in the index is expected to precede a drop in stock prices.
- A fall in the confidence index represents the fact that low-grade bond yields are rising faster or falling more slowly than high grade yields

### Relative Strength Analysis -

- The prices of some securities rise relatively faster in a bull market or decline more slowly in a bear market than other securities
- Investors will earn higher returns by investing in securities
- Even ratios like security relative to its industry and security relative to the entire market can also be used to detect relative strength in a security or an industry

### Odd - Lot Theory -

- It assumes that the average person is usually wrong and that a wise course of action is to pursue strategies contrary to popular opinion.
- The odd-lot theory is used primarily to predict tops in bull markets, but also to predict reversals in individual securities.

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**Question 7 :**

*Write a Short note on Support and Resistance Levels?*

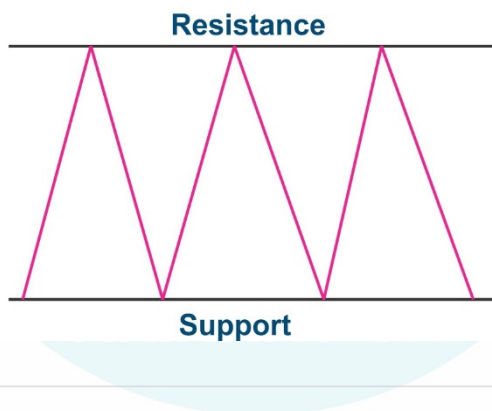
**Answer :**

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



The resistance level is stronger every time that price respects the resistance line and/or if high volumes are traded at that level.

The support level is stronger every time that price respects the support line and/or if high volumes are traded at the support level.



**Question 8 :**

*Explain Interpreting Price Patterns.*

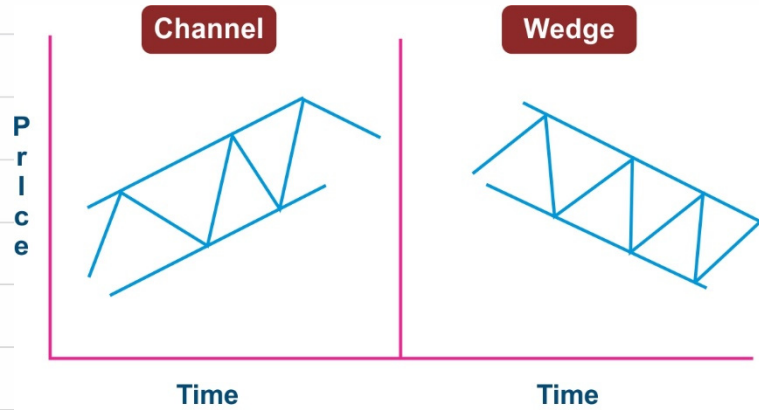
OR

*What are the numerous price patterns documented by Technical Analysis?*

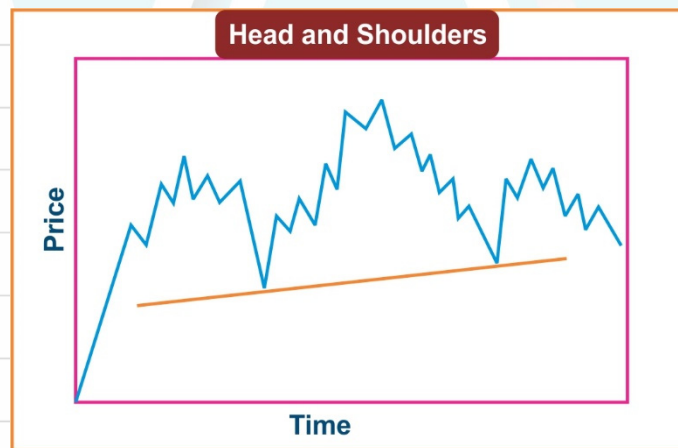
**Answer :**

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



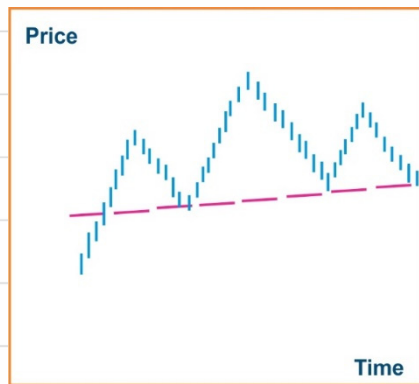


- **Wedge** – A wedge is formed when the *tops* (resistance levels) and *bottoms* (support levels) change in opposite direction (that is, if the tops, are decreasing then the bottoms are increasing and vice versa), or when they are changing in the same direction at different rates over time.
- **Head and Shoulders** – It is a distorted drawing of a human form, with a large lump (for head) in the middle of two smaller humps (for shoulders). This is perhaps the single most important pattern to indicate a reversal of price trend. The neckline of the pattern is formed by joining points where the head and the shoulders meet.



- **Head and Shoulder Top Pattern** – 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*.

- Inverse Head and Shoulder Pattern - 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*



HEAD &amp; SHOULDERS

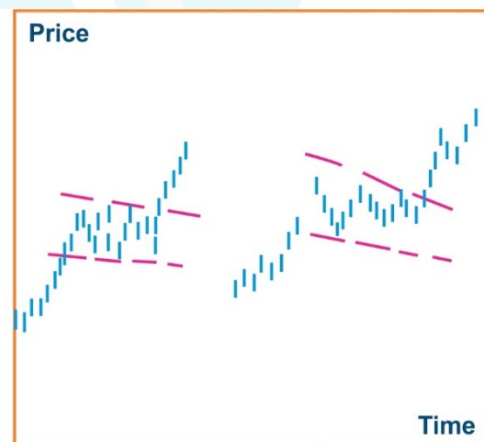


INVERSE HEAD &amp; SHOULDERS

- Triangle or Coil Formation - This formation represents a pattern of uncertainty and is difficult to predict which way the price will break out
- Flags and Pennants Form - This form signifies a phase after which the previous price trend is likely to continue.

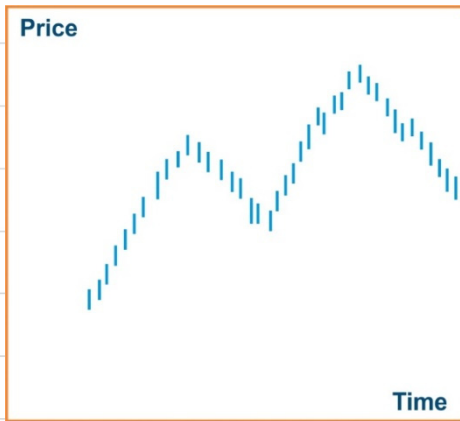


TRIANGLE OR COIL

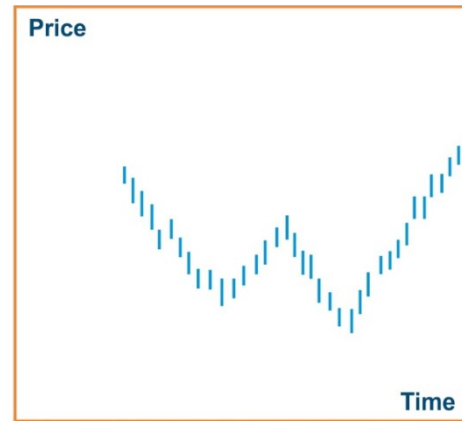


FLAG &amp; PENNANT

- Double Top Form - This form represents a *bearish development*, signals that price is expected to fall.
- Double Bottom Form - This form represents *bullish development* signalling price is expected to rise.



DOUBLE TOP



DOUBLE BOTTOM

- **Gap** – A gap is the difference between the opening price on a trading day and the closing price of the previous trading day. The wider the gap the stronger the signal for a continuation of the observed trend.

### Question 9 :

What are the Decision Using Data Analysis?

Answer :

- a) **Moving Averages** – Moving averages are frequently plotted with prices to make buy and sell decision, to identify trend, technical analysts use moving average analysis
- A 200 day's moving average of daily prices or a 30 week moving of weekly price for identifying a long term trend.
  - A 60 day's moving average of daily price to discern an intermediate term trend
  - A 10 day's moving average of daily price to detect a short term trend.

Buy and Sell Signals Provided by Moving Average Analysis

| Buy Signal   | Sell Signal   |
|--|---|
| (a) Stock price line rise through the moving average line when graph of the moving average line is flattering out. | (a) Stock price line falls through moving average line when graph of the moving average line is flattering out. |



(b) Stock price line falls below moving average line which is rising.

(b) Stock price line rises above moving average line which is falling.

(c) Stock price line which is above moving average line falls but begins to rise again before reaching the moving average line

(c) Stock price line which is slow moving average line rises but begins to fall again before reaching the moving average line.

b) Exponential Moving Average – Unlike the AMA, which assigns equal weight of  $1/n$  to each of the  $n$  prices used for computing the average, the Exponential Moving Average (EMA) assigns decreasing weights, with the highest weight being assigned to the latest price. The weights decrease exponentially, according to a scheme specified by the exponential smoothing constant, also known as the exponent,  $a$ .

$$EMA_t = aP_t + (1-a)(EMA_{t-1})$$

Where,  $a$  (exponent) =  $\frac{2}{n+1}$

$P_t$  = Price of today

$EMA_{t-1}$  = Previous day's EMA

Or

$$EMA_t = (\text{Closing Price of the day} - \text{EMA of Previous Day}) \times \text{Exponent} + \text{Previous day EMA}$$

$n$  = Number of days for which average is to be calculated.

**Question 10 :**

**Describe the Concept of Evaluation of Technical Analysis.**

(MTP March 19)

**Answer :**

Technical Analysis has several supporters as well several critics

1. Tools of technical analysis help in identifying these trends early and help in investment decision making



2. Technical analysis helps in detecting this shift rather early and hence provides clues to future price movements.
3. Price movement tends to continue more or less in same direction till the information is fully assimilated in the stock price

Detractors of technical analysis believe that it is an useless exercise; their arguments are as follows:

1. Most technical analysts are not able to offer a convincing explanation for the tools employed by them.
2. Empirical evidence in support of random walk hypothesis cast its shadow over the usefulness of technical analysis.
3. By the time an up trend and down trend may have been signalled by technical analysis it may already have taken place.
4. Ultimately technical analysis must be self-defeating proposition

**Question 11 :**

**Differences between Fundamental Analysis and Technical Analysis**

**Answer :**

| S. No. | Basis      | Fundamental Analysis   | Technical Analysis   |
|--------|------------|--|--|
| 1      | Method     | Prospects are measured by analyzing economy's macro factors such as Country's GDP, Inflation Rate, Interest Rate, Growth Rate etc. and company's micro factors like its Sales, Profitability, Solvency, Asset & Liabilities and Cash position etc. | Predicts future prices and their direction using purely historical market data and information such as their Price Movements, Volume, Open Interest etc. |
| 2      | Rule       | Prices of a share discounts everything.  | Price captures everything  |
| 3      | Usefulness | For Long-Term Investing  | For Short-term Investing   |



### Question 12 :

Explain the Efficient Market Theory (Efficient Market Hypothesis)

Answer :

- No investor can consistently outperform the market as every stock is appropriately priced based on available information
- No one can "beat the market" hence making it impossible for investors to either purchase undervalued stocks or sell stocks for inflated prices as stocks are always traded at their fair value on stock exchanges.

### Search for Theory

- Stock price was a result of efficient market that led to the following viewpoints:
- Information is freely and instantaneously available to all market participants.
- Keen competition among the market participants more or less ensures that market will reflect intrinsic values. This means that they will fully impound all available information.
- Price change only response to new information that is unrelated to previous information and therefore unpredictable.

### Misconception about Efficient Market Theory

- 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
- Price tends to fluctuate they cannot reflect fair value
- Inability of institutional portfolio managers to achieve superior investment performance implies that they lack competence in an efficient market
- The random movement of stock prices suggests that stock market is irrational

### Question 13 :

Explain the different levels or forms of Market Efficiency?

Answer :

- (i) Weak form efficiency - Price reflect all information found in the record of past prices and volumes.





(ii) Semi - Strong efficiency - Price reflect not only all information found in the record of past prices and volumes but also all other publicly available information.

(iii) Strong form efficiency - Price reflect all available information public as well as private.

### Empirical Evidence on Weak form of Efficient Market Theory

- Serial Correlation Test - price change in one period has to be correlated with price change in some other period. Price changes are considered to be serially independent. 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
- Run Test - Given a series of stock price changes each price change is designated + if it represents an increase and - if it represents a decrease. 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
- Filter Rules Test - If the price of stock increases by at least N% buy and hold it until its price decreases by at least N% from a subsequent high. When the price decreases at least N% or more, sell it. If the behaviour of stock price changes is random, filter rules should not apply in such a buy and hold strategy

### Empirical Evidence on Semi-strong Efficient Market Theory

There have been studies which have been empirically documented showing the following inefficiencies and anomalies:

- Stock price adjust gradually not rapidly to announcements of unanticipated changes in quarterly earnings.
- Small firms' portfolio seemed to outperform large firms' portfolio.
- Low price earning multiple stock tend to outperform large price earning multiple stock.
- Monday's return is lower than return for the other days of the week.

### Empirical Evidence on Strong form of Efficient Market 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





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

**Question 14 :**

Mention the Various Challenges to the Efficient Market Theory.

(MTP May 20)

**Answer :**

Information inadequacy – 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.

Limited information processing capabilities – Human information processing capabilities are sharply limited.

Irrational Behaviour – It is generally believed that investors' rationality will ensure a close correspondence between market prices and intrinsic values. The market seems to function largely on hit or miss tactics rather than on the basis of informed beliefs about the long term prospects of individual enterprises

Monopolistic Influence – A market is regarded as highly competitive. No single buyer or seller is supposed to have undue influence over prices. In practice, powerful institutions and big operators wield grate influence over the market.

**Question 15 :**

Describe the role of financial market in economic development.

(MTP March 18)

**Answer :**

The contribution of various types of financial markets in economic development has been discussed as below:

(i) Capital Market.

➤ where long term debt and equity funds are traded. Industries which require capital





on a large scale may tap the capital market.

- Therefore, the capital market provides the much needed liquidity into the economy and it gives a big boost to the GDP

(ii) Money Market:

- Money market is the market where short-term funds are traded. In simple term, it means that all the financial assets or instruments which can be easily converted into money are traded in this market
- The short-term money requirement of the borrowers can be easily met with the funds provided by the money market.

(iii) Foreign Exchange Market:

- Foreign exchange earned through foreign direct investment in India can be used to remove the poverty and for other productive purposes.

(iv) Derivative Market:

- The derivatives market is the financial market for derivatives which are derived from other forms of assets.
- Since all transactions related to derivatives take place in future, it provides individuals with better opportunities because an individual who want to short (sell) some stock for long time can do it only in futures or options hence the biggest benefit of this is that it gives numerous options to an investor or trader to execute all sorts of strategies







# Security Valuation

STUDY SESSION 4

Security Valuation

## Question 1 :

Explain term structure theories?

Answer :

### (a) Unbiased Expectation Theory :

- Long-term interest rates can be used to forecast short-term interest rates in the future
- On the basis of rolling the sum invested for more than one period.

### (b) Liquidity Preference Theory :

- Forward rates reflect investors' expectations of future spot rates plus a liquidity premium
- To compensate them for exposure to interest rate risk
- Positive slope may be a result of liquidity premium.

### (c) Preferred Habitat Theory :

- Premiums are related to supply and demand for funds at various maturities - not the term to maturity and
- Hence this theory can be used to explain almost any yield curve shape.

## Question 2 :

Write short note on Zero Coupon Bonds?

Answer :

- These bonds do not pay interest during the life of the bonds.
- Issued at discounted price to their face value.
- When a zero-coupon bond matures, the investor will receive one lump sum (face value) equal to the initial investment plus interest that has been accrued on the investment made.
- Maturity dates on zero coupon bonds are usually long term.
- These maturity dates allow an investor for a long-range planning.
- Zero coupon bonds issued by banks, government and private sector companies.





- Bonds issued by corporate sector carry a potentially higher degree of risk, but they also provide an opportunity to achieve a higher return.

### Question 3 :

Why should the duration of a coupon carrying bond always be less than the time to its maturity?

### Answer :

- Duration is nothing but the average time taken by an investor to collect his/her investment
- If an investor receives a part of his/her investment over the time on specific intervals before maturity, then the duration which would be lesser than the maturity of the instrument.
- It measures how quickly a bond will repay its true cost.
- Longer the time it takes the greater exposure the bond has to changes in the interest rate environment.
- Following are some of factors that affect bond's duration:
  - Time to maturity – the shorter-maturity bond would have a lower duration and less price risk and vice versa.
  - Coupon rate – Coupon payment is a key factor in calculation of duration of bonds. The higher the coupon, the lower is the duration and vice versa.

### Question 4 :

Write short note on Bond Immunization?

### Answer :

- We know that when interest rate goes up although return on investment improves but value of bond falls and vice versa. Thus, the price of Bond is subject to following two risk:
  - a) Price Risk
  - b) Reinvestment Rate Risk





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

### Question 5 :

What is Reverse Stock Split and why companies resort it?

(MTP Apr 19, RTP Nov 19)

### Answer :

- A 'Reverse Stock Split' is a process whereby a company decreases the number of shares outstanding by combining current shares into fewer or lesser number of shares.
- Reverse stock split does not result in change in Market value or Market Capitalization, but it results in increase in price per share.
- Company carries out reverse split up due to following reasons:
  - Avoiding delisting from stock exchange - Sometimes as per the stock exchange regulations if the price of shares of a company goes below a certain limit it can be delisted. To avoid such delisting company may resort to reverse stock split up.
  - Avoiding removal from constituents of Index - If company's share is one of the constituents of the market index then to avoid their removal of scrip from this list due to persistent fall in the prices of share, the company may take reverse split up route.
  - To avoid the tag of "Penny Stock" - If the price of shares of a company goes below a limit it may be called "Penny Stock". To improve the image of the company and avoiding this stage, the company may go for Reverse Stock Split.
  - To attract Institutional Investors and Mutual Funds - It might be possible that institutional investors may be shying away from acquiring low value shares and hence to attract these investors the company may adopt the route of Reverse Stock Split up to increase the price per share.







### Question 6 :

Briefly explain the concept of Credit Rating.

(MTP Oct 2018)

Security Valuation

### Answer :

Credit Rating means an assessment made from credit-risk evaluation, translated into a current opinion as on a specific date on the quality of a specific debt security issued or on obligation undertaken by an enterprise in terms of the ability and willingness of the obligator to meet principal and interest payments on the rated debt instrument in a timely manner.

Thus, Credit Rating is:

- (1) An expression of opinion of a rating agency.
- (2) The opinion is regarding a debt instrument.
- (3) The opinion is as on a specific date.
- (4) The opinion is dependent on risk evaluation.
- (5) The opinion depends on the probability of interest and principal obligations being met timely.

Such opinions are relevant to investors due to the increase in the number of issues and in the presence of newer financial products viz. asset backed securities and credit derivatives.

### Question 7 :

Write a short note on various Money Market Instruments .

### Answer :

#### TREASURY BILLS (TBs)

- **Meaning :** T-Bills are short term instruments issued by RBI on behalf of the Government of India to tide over short term liquidity shortfalls.
- **Periodicity :** The periodicity of the T-Bills is 14 days, 28 days, 91 days, 182 days & 364 days.
- **Issue Price :** Treasury Bills are issued at a discount and redeemed at face value .
- **SGL Account :** T-Bills transactions are routed through the Special General Ledger (SGL) Accounts.



### Yield / Return

1. The return from T-Bills is in the form of Capital Profit i.e. difference between issue price (which is at a discount) & redemption price (at par)
2. Their yields can be calculated with the help of the following formula

$$Y = \frac{FV - \text{Issue Price}}{\text{Issue Price}} \times \frac{12}{\text{Required Period}} \times 100$$

### Features

1. Government's contribution to the money market
2. Mop-up short-term funds in the money market
3. Sold through auctions
4. Discount rate is market driven
5. Focal Point for monetary policy

### Advantages to Investor

1. Manage cash position with minimum balances
2. Increased liquidity
3. Very little risk
4. Market related yield
5. Eligible for repos
6. SLR security
7. Two-way quotes by DFHI/Primary Dealers Bank
8. No capital loss

### Auction

- T-bills are issued by the RBI through the auction method
- There are two types of auctions for T-Bills
  - Multiple Price Based
    - all bids equal to or above the cut off price is accepted
    - however, the bidder has to obtain the T-bills at the price quoted by him.
    - 364 days T-Bills are auctioned



- Uniform Price Based

- all the bids equal to or above the cut off price are accepted at the cut off level
- all the bids equal to or above the cut off price are accepted at the cut off level not the price quoted by him
- 91 days T-Bills are auctioned

- RBI Role

- amount to be accepted at the auctions and the cut-off price are decided by the Reserve Bank of India
- on the basis of its public debt management policy, the conditions in money market and its monetary policy

- Participants : TBs can be purchased by any person, firm, company, corporate body and institutions.

- Lots : TBs are issued in lots of ₹ 25,000 (14 days and 91 days)/₹ 1,00,000 (364 days)

- Importance

- The treasury bills are extremely important among money market instruments, both for the issuer & investors
- Through these instruments, Government can raise funds for short term to meet the temporary mismatches in cash flows & mop up excess liquidity in the system
- Thus it have emerged as an effective instrument for dynamic asset-liability management

### COMMERCIAL BILLS or Derivative Usance Promissory Notes (DUPNs)

- The commercial bill is a instrument drawn by a seller of goods on a buyer of goods
- advantages of commercial bills, like, self-liquidating in nature, recourse to two parties, knowing exact date of transactions, transparency of transactions etc
- It can discount with approved institutions
- Bills which were originally discounted by them provided that the bills should have arisen out of genuine commercial trade transactions



- The need for *physical transfer* of commercial bills has been *waived* and the rediscounting institution can now raise Derivative Usance Promissory Notes (DUPNs).
- *DUPN* is an innovative instrument issued by the RBI to *eliminate movement of papers* and *facilitating easy rediscounting*
- *Backing* : DUPN is backed by up to *90 Days Usance Commercial Bills*
- *Transfer* : DUPN is transferable by *endorsement and delivery* and hence liquid
- *Stamp Duty* : Government has *exempted stamp duty* on derivative usance promissory notes
- *Maturity* : These DUPNs are sold to investors in *convenient lots and maturities (15 days to 90 days)* on the basis of genuine trade bills, discounted by the discounting bank.
- *Condition* : The discounting bank should, comply with the following conditions
  1. Bank which originally discounts the bills *only draw DUPN*
  2. Continue to *hold unencumbered usance bills* till the date of maturity of DUPN
  3. Matured bills should be *substituted by fresh eligible bills.*
  4. The transactions underlying the DUPN should be *bonafide commercial or trade transactions*
  5. The *usance* of the bill should *not exceed 120 days* & the *unmatured period* of such bills for drawing DUPN should *not exceed 90 days*
- *Issue at a discount* : The DUPN is issued at a discount which is realised at front-end.
- *Yield* : The yield to the investor can be calculated with the following formula,

$$Y = \frac{FV - \text{Issue Price}}{\text{Issue Price}} \times \frac{12}{\text{Required Period}} \times 100$$

- Where Y = Actual Yield, D = Discount Rate, M = Period of discount compounded for one year (12/Number of months or 365/number of days)
- *Importance* :
  - re-discounting is a safe and highly liquid instrument
  - advantage to both borrower and lender
  - better used for management of temporary mismatches in cash flows and asset-liability management



- it is a negotiable self - liquidity instrument with low degree of risk.

### Call/Notice Money

- The core of the Indian money market structure is the interbank call money market which is centralized primarily in Mumbai, but with sub-markets in Delhi, Calcutta, Chennai and Ahmedabad.
- Meaning :
  - Call money or inter-bank call money is the medium through which the scheduled commercial banks lend, borrow or call at short notice to manage the day-to-day surpluses and deficits in the cash flow.
  - The money that is lent for one day in this market is known as 'call money' and if it exceeds one day (but less than 15 days), it is referred as 'notice money'.
- Participants
  - The participants in the markets are commercial banks, cooperative banks and primary dealers who can borrow and lend funds
  - Large mutual funds promoted by nationalized banks, private sector mutual funds and all India financial institutions can participate in the market as lenders only.
  - Brokers are not permitted in the market
- Risk Involved :
  1. Interest rate in the market is market driven and is highly sensitive to the forces of demand and supply. Hence, the participants in the markets are exposed to a high degree of interest rate risk
  2. The activities in the money market are subjected to fluctuations due to seasonal factors, i.e. busy (November to April) and slack (May to October) seasons.
- Factor Affecting Call Rates: different factors which affect & make the call rates to be volatile. Some of these factors are
  1. Liquidity Position: Call rates depend on the liquidity position of the economy in general and of the banking system in particular
  2. CRR Requirement: A reduction in CRR results in lesser cash balance to be maintained by banks which dampens the demand in call market and thus reducing the call rate.





3. Volatility in the Foreign Exchange Market: Volatility in the foreign exchange market affects fluctuations in call rates.
4. Capital Market Conditions: The volatility in call rate is also affected by the capital market conditions.
5. Level of Competition in the Call Market: The level of competition and the number of participants affect the volatility in the call money market
  - Security: No collateral security is required to cover these transactions .
  - Account with RBI: In view of the short tenure of such transactions , both the Borrowers and the Lenders are required to have current accounts with the Reserve Bank of India
  - Indian Scenario: The emergence of a purely interbank call money market is shaping up. In a recent development, Corporate are now not allowed to route call money transactions through primary dealers
  - Benefits:
    1. Even out day to day deficits: Call Market enables Banks and Financial institutions to even out their day-to-day deficits and surplus of money
    2. Cash Reserve Requirements: Commercial Banks, Co-operative Banks and Primary Dealers are allowed to borrow and lend in this market for adjusting their cash reserve requirements.
    3. Outlet for Deploying Funds: It serves as an outlet for deploying funds on short-term basis to the lenders having steady inflow of funds.

### COMMERCIAL PAPER (CP)

- Meaning: CP is an unsecured debt instrument in the form of a promissory note issued by highly rated borrowers for tenors ranging between 15 days to one year for meeting working capital requirement directly from the market instead of borrowing from banks.
- Origination: The concept of CPs was originated in USA in early 19th century when commercial banks monopolized and charged high rate of interest on loans and advances. In India, the CP was introduced in January 1990 on the recommendation of Vaghul Committee.
- Conditions under which the CPs can be issued are:







1. the issuer company should have a minimum net worth and fund-based working capital limit of not less than ₹ 4 crores each.
  2. the company should obtain a minimum rating as required from CRISIL/ICRA/CARE etc. which should not be more than 2 months old at the time of issue of CPs.
  3. CP should be issued for a minimum period of 7 days and a maximum of less than 1 year
  4. minimum amount of CP issued for a single investor will be ₹ 25 Lakhs in the minimum denomination of ₹ 5 Lakhs
  5. CPs can be issued to a of maximum of 100% the fund-based working capital limits of issuer company,
  6. the banks can neither extend any stand-by or underwriting facility nor guarantee payment of the instrument on maturity
  7. the CPs are subject to stamp duty. Besides, the issuer has to incur rating agency fee, issuing and paying agents fee, etc
- Mode of CP : CP has to be issued at a discount to face value. Discount rate has to be freely determined by the market
  - Negotiability of CP : CP (being usance promissory note) would be freely negotiable by endorsement and delivery
  - Stamp Duty : The issue of CP would be subject to payment of stamp duty
  - Benefits of CP to the Issuer
    1. Low interest expenses : The interest cost associated with the issuance of CP is normally expected to be less than the cost of bank financing
    2. Access to short term funding : CP issuance provides a company with increased access to short term funding sources.
    3. Flexibility and liquidity : CP affords the issuer increased flexibility and liquidity in matching the exact amount and maturity of its debt to its current working capital requirement.
    4. Investor recognition : The issuance of CP provides the issuer with favourable exposure to major institutional investors as well as wider distribution of its debt



5. Ease and low cost of establishment : A CP programme can be established with ease at a low cost, once the basic criteria have been satisfied.

▪ Benefits of CP to the Investor

1. Higher yield : Higher yields are expected to be generally obtainable on CP than on other short term money market instruments like bank deposits

2. Portfolio diversification : Commercial Paper provides an attractive avenue for short term portfolio diversification.

3. Flexibility : CPs can be issued for periods ranging from 15 days to less than one year, thereby affording an opportunity to precisely match cash flow requirements

4. Liquidity : Liquidity in CP is generally provided by a dealer offering to buy it back from an investor prior to maturity, for which a market quote will be available. The investment in CP will therefore be quite liquid

▪ Principal Parties to a Commercial Paper Transaction

➤ (i) The Issuer, (ii) The Head Bank, (iii) The Issuing and Paying Agency, (iv) The Investor, (v) The Dealer, (vi) Credit Rating Agency, e.g., CRISIL, ICRA etc., (vii) RBI

1. Governing Authority : Issue of CP is governed by RBI guidelines as amended from time to time.

2. Limitation of Commercial Paper : CP as a source of financing has its own limitations

a. Only highly credit rating firms can use it. New and moderately rated firms generally are not in a position to issue CP

b. CP can neither be redeemed before maturity nor can be extended beyond maturity

**Question 8:**

Write a Short Note on Repo [ Repurchase Option ] Agreement ? Briefly state the difference between Repo & Reverse Repo? Or What is Repo and Reverse Repo.

**Answer :**

▪ A Repurchase Agreement (or repo) is an agreement of sale of a security with a commitment to repurchase or buy the security back at a specified price and on a specified date .





- Reverse repo is a term used to describe the opposite side of a repo transaction. Reverse Repo is a purchase of security with a commitment to sell at a pre-determined price and date. Accordingly, there are two possible motives for entering into a reverse repo: short-term investment of funds, or to obtain temporary use of a particular security.
- Repos/Reverse Repos are used :
  - (i) to meet shortfall in cash position
  - (ii) augment returns on funds held
  - (iii) to borrow securities to meet regulatory requirement
  - (iv) An SLR surplus bank and a CRR deficit bank can use the Repo deals as a convenient way of adjusting CRR/SLR positions simultaneously
  - (v) RBI uses Repo and Reverse Repo deals as a convenient way of adjusting liquidity in the system.
- The securities eligible for trading under Repo/Reverse Repo are:
  - (i) GOI & State Govt. Securities
  - (ii) Treasury Bills
  - (iii) PSU bonds,
  - (iv) FI bonds & Corporate bonds held in Dematerialised form
- Issuer : In India, only RBI, Banks and PDs are allowed to enter into Repos. Financial institutions and others specified can only do reverse Repos.
- Coupon/Interest terms :
  - (i) Computation: Interest for the period of Repo is the difference between Sale Price and Purchase Price. The amount of interest earned on funds invested in a Repo is determined as follows :

$$\text{Interest earned} = \text{Funds Invested} \times \text{Repo Rate} \times \text{Number of Days}/365$$

- (ii) Recognition : Interest should be recognized on a time -proportion basis , both in the hooks of the buyer and seller.



(iii) **Time Period** : Interest to be payable on maturity and rounded-off to the nearest rupee. Interest to be calculated on an actual/365-day year basis.

- **Maturity** : Repos are normally done for a minimum maturity period of one day & a maximum maturity period of fourteen days.
- **Minimum denomination and transaction size** : Generally Repo transactions are done in market lots of ₹ 5 crores.
- **The essential feature of Repo transaction are :**
  - (i) A financial institution places certain securities (presently restricted to Treasury bills) with the buyer and borrows a certain amount of money.
  - (ii) On a given date specified in advance (between 14 days to 1 year) the entire transaction is reversed.
  - (iii) The difference between the purchase and sale price is the interest or gain to the buyer. Sometimes the seller may also gain from a transaction. This is when the buyer is in need of securities and initiates the transaction.

#### Difference Between Repo & Reverse Repo :

- Reverse repo is a term used to describe the opposite side of a repo transaction.
- The term Repurchase Agreement (Repo) and Reverse Repurchase Agreement (Reverse Repo) refer to a type of transaction in which money market participant raises funds by selling securities and simultaneously agreeing to repurchase the same after a specified time generally at a specified price, which typically includes interest at an agreed upon rate. Such a transaction is called a Repo
  - Reverse Repo when described from the point of view of the supplier of funds.
- Thus, whether a given agreement is termed a Repo or a Reverse Repo depends largely on which party initiated the transaction.
- Under a Repo transaction, there are two counter parties : a lender and a borrower. The borrower in a Repo borrows cash and pledges securities. The lender lends cash and purchases the securities and is said to enter into a Reverse Repo transaction. Hence borrowing by pledging securities is a Repo transaction and lending by accepting the pledge is a Reverse Repo transaction.



- Hence a transaction is a Repo for one party and a Reverse Repo for the other party.  
*India's Position:* Indian Repo market is governed by Reserve Bank of India. At present Repo is permitted between 64 players against Central and State Government Securities (including T-Bills) at Mumbai.





# Portfolio Management

## STUDY SESSION 5

### Question 1 :

Briefly explain the Objectives of Portfolio Management ?

#### Answer :

Some of the important objectives of portfolio management are:

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

### Question 2 :

Discuss the various kinds of Systematic and Unsystematic risk?

#### Answer :

There are two types of Risk - Systematic (or non-diversifiable) and unsystematic (or diversifiable) relevant for investment - also, called as general and specific risk.







## Types of Systematic Risk

### Market risk

- Interest rate structure remain more or less unchanged prices of securities
- Major cause appears to be the changing psychology of the investors
- Irrationality in the security markets may cause losses unrelated to the basic risks.
- These losses are the result of changes in the general tenor of the market and are called market risks.

### Interest Rate Risk

- Change in the interest rate has a bearing on the welfare of the investors
- Interest rate goes up, the market price of existing fixed income securities falls and vice versa

### Social or Regulatory Risk

- The social or regulatory risk arises, where an otherwise profitable investment is impaired as a result of adverse legislation, harsh regulatory climate, or in extreme instance nationalization by a socialistic government

### Purchasing Power Risk

- Inflation or rise in prices lead to rise in costs of production, lower margins, wage rises and profit squeezing etc.
- The return expected by investors will change due to change in real value of returns.

## Classification of Unsystematic Risk

### Business Risk

- One is exposed to the risk of poor business performance.
- This may be caused by a variety of factors like heightened competition, emergence of new technologies, development of substitute products, shifts in consumer preferences, inadequate supply of essential inputs, changes in governmental policies and so on.
- Often of course the principal factor may be inept and incompetent management

### Financial Risk

- This relates to the method of financing, adopted by the company, high leverage leading to larger debt servicing problem or short term liquidity problems due to bad debts,



delayed receivables and fall in current assets or rise in current liabilities

### Default Risk

- Risk accruing from the fact that a borrower may not pay interest and/or principal on time.
- Except in the case of highly risky debt instrument, investors seem to be more concerned with the perceived risk of default rather than the actual occurrence of default.
- Even though the actual default may be highly unlikely, they believe that a change in the perceived default risk of a bond would have an immediate impact on its market price.

### Question 3 :

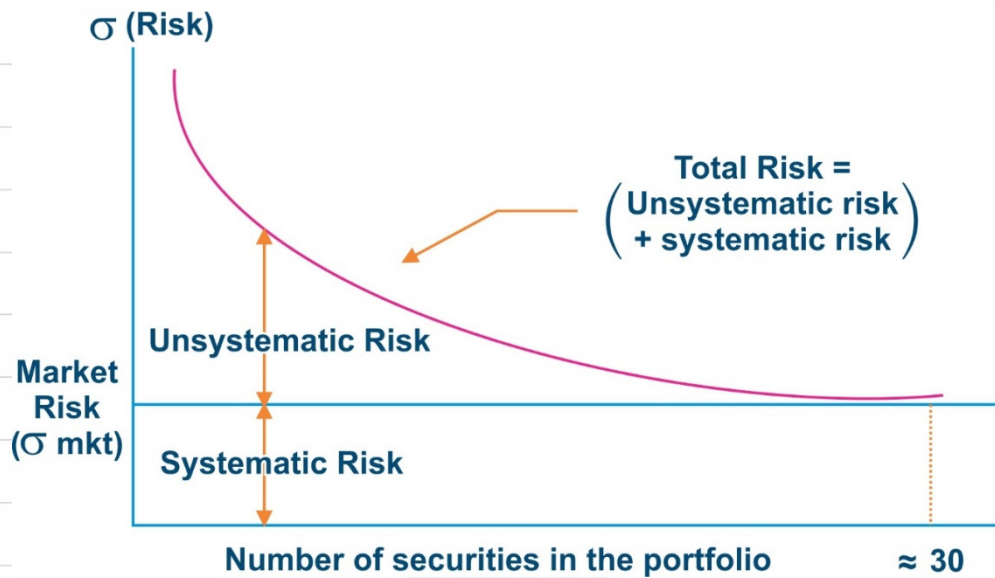
Distinguish between 'Systematic risk' and 'Unsystematic risk'.

Answer :

#### Systematic risk -

- Refers to the variability of return on stocks or portfolio associated with changes in return on the market as a whole.
- It arises due to risk factors that affect the overall market
  - changes in the nations' economy, tax reform by the Government or a change in the world energy situation.
- These are risks that affect securities overall and, consequently, cannot be diversified away.
- This is the risk which is common to an entire class of assets or liabilities.
- The value of investments may decline over a given time period
  - simply because of economic changes or other events that impact large portions of the market
- Asset allocation and diversification can protect against systematic risk because different portions of the market tend to underperform at different times. This is also called market risk.





### Unsystematic risk

- Risk unique to a particular company or industry
- It is *avoidable* through diversification
- This is the risk of *price change* due to the *unique circumstances* of a specific security as opposed to the overall market.
- This risk can be virtually eliminated from a portfolio through diversification.

### Question 4 :

Write short note on Factors affecting investment decisions in portfolio management.

Answer :

Factors affecting Investment Decisions in Portfolio Management

#### (i) Objectives of investment portfolio

- There can be *many objectives* of making an investment.
- Manager of a provident fund portfolio has to look for security (low risk) and *may be satisfied* with none too higher return.
- An *aggressive investment company* may, however, be willing to take a high risk in order to have *high capital appreciation*



(ii) Selection of investment

a) -

- ❖ What types of securities to buy or invest in?
- ❖ There is a wide variety of investments opportunities available
- ❖ i.e. debentures, convertible bonds, preference shares, equity shares, government securities and bonds, income units, capital units etc

b) -

- ❖ What should be the proportion of investment in fixed interest/dividend securities and variable interest/dividend bearing securities?

c) -

- ❖ In case investments are to be made in the shares or debentures of companies
- ❖ which particular industries show potential of growth?

d) -

- ❖ Once industries with high growth potential have been identified
  - the next step is to select the particular companies, in whose shares or securities investments are to be made.

(iii) Timing of purchase

- At what price the share is acquired for the portfolio depends entirely on the timing decision.
- It is obvious if a person wishes to make any gains, he should "buy cheap and sell dear"
  - ❖ i.e., buy when the shares are selling at a low price and sell when they are at a high price.

**Question 5 :**

Discuss the Capital Asset Pricing Model (CAPM) and its relevant assumptions.

(May 18 Suggested)



**Answer :**

### Capital Asset Pricing Model -

- The model explains the relationship between the expected return, non-diversifiable risk and the valuation of securities.
- Considers the required rate of return of a security on the basis of its contribution to the total risk.
- Based on the premises that the diversifiable risk of a security is eliminated when more and more securities are added to the portfolio
- However, the systematic risk cannot be diversified and is or related with that of the market portfolio
- All securities do not have same level of systematic risk.
- Systematic risk can be measured by beta,  $\beta$
- Expected return on security =  $R_f + \text{Beta} (R_m - R_f)$
- The model shows that the expected return of a security consists of the risk-free rate of interest and the risk premium.
- The CAPM, when plotted on the graph paper is known as the Security Market Line (SML).
- Major implication of CAPM is that not only every security but all portfolios too must plot on SML.
- This implies that in an efficient market, all securities are expected returns commensurate with their riskiness, measured by  $\beta$ .

### Relevant Assumptions of CAPM

- (i) The investor's objective is to maximize the utility of terminal wealth;
- (ii) Investors make choices on the basis of risk and return;
- (iii) Investors have identical time horizon;
- (iv) Investors have homogeneous expectations of risk and return;
- (v) Information is freely and simultaneously available to investors;
- (vi) There is risk-free asset, and investor can borrow and lend unlimited amounts at the risk-free rate;



- (vii) There are no taxes, transaction costs, restrictions on short rates or other market imperfections;
- (viii) Total asset quantity is fixed, and all assets are marketable and divisible.
- Thus, CAPM provides a conceptual frame work for evaluating any investment decision where capital is committed with a goal of producing future returns.
  - However, there are certain limitations of the theory
    - (i) Reliability of Beta -
      - ❖ Statistically reliable Beta might not exist for shares of many firms.
      - ❖ It may not be possible to determine the cost of equity of all firms using CAPM
      - ❖ All shortcomings that apply to Beta value apply to CAPM too.
    - (ii) Other Risks
      - ❖ It emphasis only on systematic risk while unsystematic risks are also important to shareholders who do not possess a diversified portfolio.
    - (iii) Information Available
      - ❖ It is extremely difficult to obtain important information on risk-free interest rate and expected return on market portfolio as there are multiple risk-free rates for one while for another, markets being volatile it varies over time period.

### Question 6 :

Write short note on factors affecting decision of investment in fixed income securities and Equity Shares.

Answer :

#### 1) Selection of Bonds

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

##### (a) Yield to maturity -

- ❖ The yield to maturity for a fixed income avenues represent the rate of return earned by the investor
- ❖ If he invests in the fixed income avenues and holds it till its maturity.



(b) Risk of Default -

- ❖ To assess such risk on a bond, one has to look at the credit rating of the bond
- ❖ If no credit rating is available relevant financial ratios of the firm have to be examined such as debt equity, interest coverage, earning power etc. and
- ❖ The general prospect of the industry to which the firm belongs have to be assessed

(c) Tax Shield

- ❖ In the past, several fixed income avenues offers tax shields but at present only a few of them do so.

(d) Liquidity

- ❖ If the fixed income avenues can be converted wholly or substantially into cash at a fairly short notice it possesses a liquidity of a high order.

2) Selection of Stock (Equity Share)

Three approaches are applied for selection of equity shares - Technical analysis, Fundamental analysis and Random selection analysis.

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

**Question 7 :**

Describe four asset allocation strategies.

(MTP Aug 18, MTP Oct 20)

**Answer :**

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

**Question 8 :**

**Write a note on Fixed income Portfolio.**

**Answer :**

Fixed Income Portfolio is same as equity portfolio with difference that it consist of fixed income securities such as bonds, debentures, money market instruments etc. Since, it mainly consists of bonds, it is also called Bond Portfolio.

#### 1) Fixed Income Portfolio Process

Just like other portfolios, following five steps are involved in fixed income portfolio

1. Setting up objective
2. Drafting guideline for investment policy
3. Selection of Portfolio Strategy – Active and Passive
4. Selection of securities and other assets
5. Evaluation of performance with benchmark

#### 2) Calculation of Return on Fixed Income Portfolio

First and foremost step in evaluation of performance of a portfolio is calculation of return. Although there can be many types of measuring returns there can be many types



of measuring returns as per requirements but some of are commonly used measures are:

- (i) Arithmetic Average Rate of Return
- (ii) Time Weighted Rate of Return
- (iii) Rupee Weighted Rate of Return
- (iv) Annualized Return

### 3) Fixed Income Portfolio Management Strategies

There are two strategies

- (i) Passive Strategy
- (ii) Active Strategy

(i) Passive Strategy – As mentioned earlier Passive Strategy is based on the premise that securities are fairly priced commensurate with the level of risk. Though investor does not try to outperform the market but it does not imply they remain totally inactive. Two common strategies applied by passive investors of fixed income portfolios are as follows:

#### (a) Buy and Hold Strategy

- This technique is do nothing technique
- Investor continues with initial selection and do not attempt to churn bond portfolio to increase return or reduce the level of risk.
- Sometime to control the interest rate risk, the investor may set the duration of fixed income portfolio equal to benchmarked index

#### (b) Indexation Strategy

- replication of a predetermined benchmark well known bond index as closely as possible.

#### (c) Immunization

- Cannot exactly be termed as purely passive strategy but a hybrid strategy.
- More popular among pension funds
- Since pension funds promised to pay fixed amount to retires people in the form of annuities
- By building an immunized portfolio the interest rate risk can be avoided





(d) Matching Cash Flows

- Another stable approach to immunize the portfolio is Cash Flow Matching.
- This approach involves buying of Zero Coupon Bonds to meet the promised payment out of the proceeds realized.

(ii) Active Strategy

As mentioned earlier active strategy is usually adopted to outperform the market.

Following are some of active strategies

(1) Forecasting Returns and Interest Rates -

- Invokes the estimation of return on basis of change in interest rates
- Since interest rate and bond values are inversely related if portfolio manager is expecting a fall in interest rate of bonds he/she should buy with longer maturity period
- On the contrary, if he/she expected a fall in interest then he/she should sell bonds with longer period.

Based on short term yield movement following three strategies can be adopted:

- (a) Bullet Strategies
- (b) Barbell Strategies
- (c) Ladder Strategies

Further estimation of interest ratio is a daunting task, and quite difficult to ascertain. There are several models available to forecast the expected interest rates which are based on:

- (i) Inflation
- (ii) Past Trends
- (iii) Multi Factor Analysis

It should be noted that these models can be used as estimates only, as it is difficult to calculate the accurate changes.

There is one another techniques of estimating expected change in interest rate called 'Horizon Analysis'. This technique requires that analyst should select a particular holding period and then predict yield curve at the end of that period



as with a given period of maturity, a bond yield curve of a selected period can be estimated and its end price can also be calculated.

## (2) Bond Swaps

This strategy involves regularly monitoring bond process to identify mispricing and try to exploit this situation. Some of the popular swap techniques are as follows:

### (a) Pure Yield Pickup Swap -

- ✓ This strategy involves switch from a lower yield bond to a higher yield bonds of almost identical quantity and maturity
- ✓ Suitable for portfolio manager who is willing to assume interest rate risk as in switching from short term bond to long term bonds to earn higher rate of interest, he may suffer a capital loss.

### (b) Substitution Swap

- ✓ Swapping with similar type of bonds in terms of coupon rate, maturity period, credit rating, liquidity and call provision but with different prices.
- ✓ Differences exists due to temporary imbalance in the market.
- ✓ The risk a portfolio manager carries if some features of swapped bonds may not be truly identical to the swapped one

### (c) International Spread Swap

- ✓ In this swap portfolio manager is of the belief that yield spreads between two sectors is temporarily out of line and he tries to take benefit of this mismatch
- ✓ Since the spread depends on many factor and a portfolio manager can anticipate appropriate strategy and can profit from these expected differentials.

### (d) Tax Swap

- ✓ This is based on taking tax advantage by selling existing bond whose price decreased at capital loss and set it off against capital gain





in other securities and buying another security which has features like that of disposed one

### (3) Interest Rate Swap

Interest Rate Swap is another technique that is used by Portfolio

#### Question 9 :

Write a note on Alternative Investments Strategies in context of portfolio management

Answer :

#### Features of Alternative Investments

Though there may be many features of Alternative Investment but following are some common features

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

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

- 1) Mutual Funds
- 2) Real Estates
- 3) Exchange Traded Funds
- 4) Private Equity
- 5) Hedge Funds
- 6) Closely Held Companies







- 7) Distressed Securities
- 8) Commodities
- 9) Managed Futures
- 10) Mezzanine Finance

### Question 10 :

Write a note on Investment in Real Estates

### Answer :

Since, some of the above terms have been covered under the respective chapter in this study, we shall cover other terms hereunder.

#### 1) Real Estates

- As opposed to financial claims in the form of paper or a dematerialized mode, real estate is a tangible form of assets which can be seen or touched
- Real Assets consists of land, buildings, offices, warehouses, shops etc.
- Real investment is like any other investment but it has some special features
- As every country has their own laws and paper works which makes investment in foreign properties less attractive
- In recent time due to globalization investment in foreign real estate has been increased

#### 2) Valuation Approaches

- Comparing to financial instrument the valuation of Real Estate is quite complex as number of transactions or dealings comparing to financial instruments are very small.
- Following are some characteristics that make valuation of Real Estate quite complex:
  - (i) Inefficient market : Information as may not be freely available as in case of financial securities
  - (ii) Illiquidity : Real Estates are not as liquid as that of financial instruments.
  - (iii) Comparison : Real estates are only approximately comparable to other properties.

- (iv) High Transaction cost : In comparison to financial instruments, the transaction and management cost of Real Estate is quite high.
- (v) No Organized market : There is no such organized exchange or market as for equity shares and bonds.

### 3) Valuation of Real Estates

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

- (1) Sales Comparison Approach : It is like Price Earning Multiplier as in case of equity shares. Benchmark value of similar type of property can be used to value Real Estate.
- (2) Income Approach : This approach like value of Perpetual Debenture or unredeemable Preference Shares. In this approach the perpetual cash flow of potential net income (after deducting expense) is discounted at market required rate of return.
- (3) Cost Approach : In this approach, the cost is estimated to replace the building in its present form plus estimated value of land. However, adjustment of other factors such as good location, neighbourhood is also made in it.
- (4) Discounted After Tax Cash Flow Approach : In comparison to NPV technique, PV of expected inflows at required rate of return is reduced by amount of investment.

#### Question 11 :

Write a note on Distressed securities.

Answer :

- It is a kind of purchasing the securities of companies that are in or near bankruptcy
- These securities are available at very low price
- The main purpose of buying such securities is to make efforts to revive the sick company
- Further, these securities are suitable for those investors who cannot participate in the market and those who want to avoid due diligence.
- Now, question arises how profit can be earned from distressed securities.
- We can see by taking long position in debt and short position in equity, how investor can earn arbitrage profit.



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

Risks Analysis of Investment in Distressed Securities : On the face, investment in distressed securities appears to be a good proposition but following types of risks are need to be analysed.

- (i) Liquidity Risk : These securities may be saleable in the market.
- (ii) Event Risk : Any event that particularly effect the company not economy as a whole
- (iii) Market Risk : This is another type of risk though it is not important.
- (iv) Human Risk : The judge's decision on the company in distress also play a big role.

**Question 12 :**

**What are the phases of Portfolio Management ?**

**Answer :**

Each phase is an integral part of the whole process and the success of portfolio management

### 2.1 Security Analysis

- Securities are normally classified on the basis of ownership
- It constitutes the *initial phase* of the portfolio formation process
- Consists in examining the *risk-return characteristics* of individual securities and also the *correlation among them*.
- Simple strategy in securities investment is to *buy under-priced* securities and *sell overpriced* securities.
- Two alternative *approaches* to analyse
  - Fundamental Analysis – Fundamental Analyst compares this *intrinsic value*
  - Technical Analysis – concentrates more on *price movements* and ignores the *fundamentals*





## 2.2 Portfolio Analysis

- Next step is to combine these to form a suitable portfolio
- Each such portfolio has its own specific risk and return characteristics
- Portfolios that can be constructed out of the set of chosen securities are termed as Feasible Portfolios.

## 2.3 Portfolio Selection

- Goal of a rational investor is to identify the Efficient Portfolios out of the whole set of Feasible Portfolios
- Efficient Portfolio has the highest return having same or lower Risk

## 2.4 Portfolio Revision

- The economy and financial markets are dynamic in nature, changes take place
- New securities with expectations of high returns and low risk may emerge
- Investor now has to revise his portfolio
- Portfolio revision may also be necessitated by some investor-related changes

## 2.5 Portfolio Evaluation

- Assessing the performance of the portfolio over a selected period of time in terms of return and risk
- It involves quantitative measurement of actual return realized and the risk borne by the portfolio
- Objective of constructing a portfolio and revising it periodically is to maintain its optimal risk return characteristics
- This step provides a mechanism for identifying weaknesses in the investment process and for improving these deficient areas.

### Question 13:

Explain Markowitz Model & its assumptions.

Answer :

### Markowitz Model -

- Optimal Portfolio as per Markowitz Theory is investor specific



- *Portfolio selection problem can be divided into two stages:*
  - *Finding the mean-variance efficient portfolios and*
  - *Selecting one such portfolio.*
- *There is a trade-off between risk and return which must be reflected in the required rates of return on investment opportunities*

### Assumptions

1. *The return on an investment adequately summarises the outcome of the investment*
2. *The investors can visualise a probability distribution of rates of return.*
3. *The investors' risk estimates are proportional to the variance of return*
4. *Investors base their investment decisions on two criteria i.e. expected return and variance of return.*
5. *All investors are risk averse*
6. *Investors are assumed to be rational*
7. *'Return' could be any suitable measure of monetary inflows*

### Question 14:

#### Explain Active Portfolio Strategy (APS)

#### Answer :

- *"Active" fund managers try to identify and invest in stocks that they think will produce better returns and beat the overall market (or Index).*

#### Four principles of on active strategy

##### a) Market Timing

- *Based on an explicit or implicit forecast of general market movement*
- *Variety of tools are employed namely business cycle analysis etc*
- *In most cases investor may go largely by its market sense*
- *An investment manager has to forecast the market correctly*

##### b) Sector Rotation

- *Sector or group rotation may apply to both stock and bond component*
- *Components of the portfolio are used when it involves shifting*



- Weighting for various industry sectors is based on their asset outlook.
- Bond portfolio sector rotation by credit rating, coupon rate, term of maturity etc.

### c) Security Selection

- It involves a search for under price security
- Such stock will be over weighted relative to their position in the market portfolio
- Security selection calls for bonds which offer the highest yields to maturity and at a given level of risk

### d) Use of Specialised Investment Concept

- To achieve superior return
- It exploited successfully are growth stock, neglected or out of favour stocks, asset stocks, technology stocks and cyclical stocks
- Advantage of cultivating a specialized investment concept
  - i. Focus one's effort on a certain kind of investment that reflects one's ability and talent.
  - ii. Avoid the distraction of perusing other alternatives
  - iii. Master an approach or style through sustained practice and continual self criticism
- Greatest disadvantage
  - i. may become obsolete







NOTES

Portfolio Management





# Securitization

STUDY SESSION 6

Securitization

Question 1 :

Explain the Features of Securitization

(MTP Aug. 18)

Answer :

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

Question 2:

Explain the benefits of Securitization from the point of view of originator.

(RTP Nov 19, Nov 19 suggested)

OR

Explain the benefits of Securitization from the perspective of both originator as well as the investor.

(May 18 Suggested)





Answer :

### 1. From the angle of originator

- Off - Balance Sheet Financing -
  - When loan/receivables are securitized it releases a portion of capital tied up in these assets resulting in off Balance Sheet financing
  - Improved liquidity position which helps in expanding the business of the company.
- More specialization in main business -
  - By transferring the assets the entity could concentrate more on core business as servicing of loan is transferred to SPV
  - Further, in case of non-recourse arrangement even the burden of default is shifted
- Helps to improve financial ratios -
  - Especially in case of Financial Institutions and Banks, it helps to manage Capital - To-Weighted Asset Ratio effectively
- Reduced borrowing Cost -
  - Issued at reduced rate as of debts
  - Originator earns a spread, resulting in reduced cost of borrowings.

### 2. From the angle of investor

- Diversification of Risk - Purchase of securities backed by different types of assets provides the diversification of portfolio resulting in reduction of risk.
- Regulatory requirement - Acquisition of asset backed belonging to a particular industry say micro industry helps banks to meet regulatory requirement of investment of fund in industry specific
- Protection against default - In case of recourse arrangement if there is any default by any third party then originator shall make good the least amount

Question 3 :

Discuss briefly the primary participants in the process of Securitization.

(MTP Aug 18, Nov 18 MTP)





**Answer :**

- Originator -
  - Initiator of deal or can be termed as securitizer
  - Entity which sells the assets lying in its books and receives the funds generated through the sale of such assets
  - Originator transfers both legal as well as beneficial interest to the Special Purpose Vehicle
- Special Purpose Vehicle -
  - Created for the purpose of executing the deal
  - Since issuer originator transfers all rights in assets to SPV, it holds the legal title of these assets
  - Created especially for the purpose of securitization only
  - Main objective of creating SPV is to remove the asset from the Balance Sheet of Originator.
  - SPV makes an upfront payment to the originator, it holds the key position in the overall process of securitization.
  - it also issues the securities to the investors
- The Investors -
  - Investors are the buyers of securitized papers which may be an individual, an institutional investor such as mutual funds, provident funds, insurance companies, mutual funds, Financial Institutions etc
  - Since, they acquire a participating in the total pool of assets/receivable, they receive their money back in the form of interest and principal as per the terms agreed.

**Question 4 :**

**Discuss briefly the Secondary Participants in the process of Securitization.**

**Answer :**

- Obligors -
  - Main source of the whole securitization process



- Owe money to the firm and are assets in the Balance Sheet of Originator
- Amount due from the obligor is transferred to SPV
- They form the basis of securitization process and their credit standing is of paramount importance in the whole process.
- Rating Agency -
  - Assets have to be assessed in terms of its credit quality and credit support available
  - Rating agency assesses the following
    - Strength of the Cash Flow
      - ❖ Mechanism to ensure timely payment of interest and principle repayment
      - ❖ Credit quality of securities
      - ❖ Liquidity support
      - ❖ Strength of legal framework
- Receiving and Paying agent (RPA) -
  - Collects the payment due from obligor(s) and passes it to SPV
  - Follow up with defaulting borrower and if required initiate appropriate legal action against them.
- Agent or Trustee -
  - Trustees are appointed to oversee that all parties to the deal perform in the true spirit of terms of agreement.
  - Normally, it takes care of interest of investors who acquires the securities.
- Credit Enhancer -
  - Investors seek additional comfort in the form of credit enhancement
  - They require credit rating of issued securities which also empowers marketability of the securities
  - Originator itself or a third party say a bank may provide this additional context called Credit Enhancer.
  - While originator provides his comfort in the form of over collateralization or cash collateral, the third party provides it in form of letter of credit or surety bonds.

▪ Structurer -

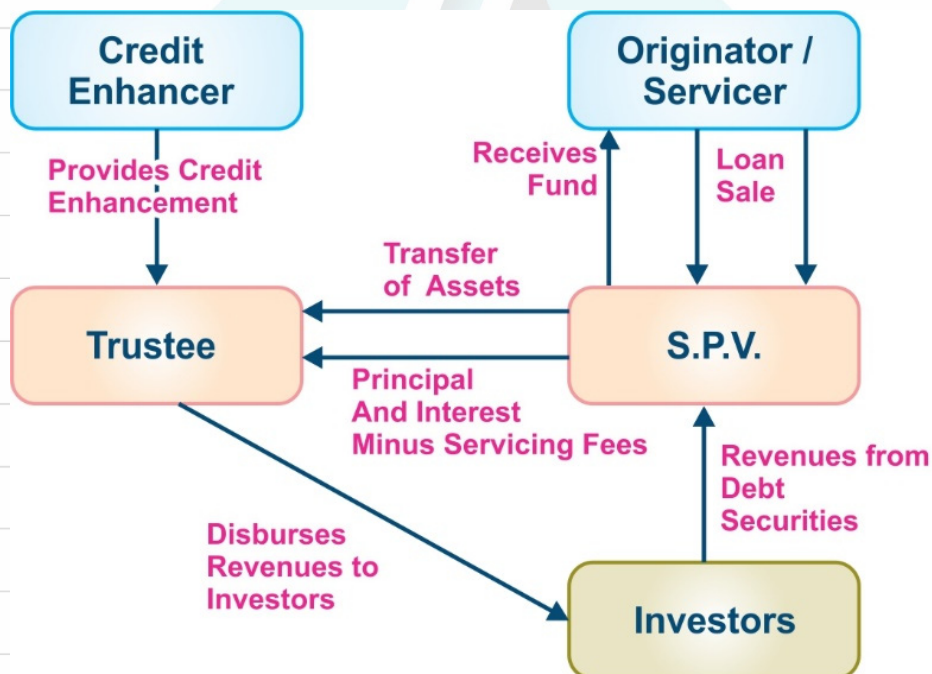
- It brings together the originator, investors, credit enhancers and other parties to the deal of securitization.
- These are investment bankers also called arranger of the deal
- It ensures that deal meets all legal, regulatory, accounting and tax laws requirements.

**Question 5 :**

Discuss briefly the steps in mechanism of securitization.

(RTP May 20, May 18 Suggested, May 19 Suggested)

**Answer :**



1. Creation of Pool of Assets

The process of securitization begins with creation of pool of assets by segregation of assets backed by similar type of mortgages in terms of interest rate, risk, maturity and concentration units.

2. Transfer to SPV

Once assets have been pooled, they are transferred to Special Purpose Vehicle (SPV) especially created for this purpose.





### 3. Sale of Securitized Papers

SPV designs the instruments based on nature of interest, risk, tenure etc. based on pool of assets. These instruments can be Pass Through Security or Pay Through Certificates.

### 4. Administration of assets

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

### 5. Recourse to Originator

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

### 6. Repayment of funds

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

### 7. Credit Rating to Instruments

Sometime before the sale of securitized instruments credit rating can be done to assess the risk of the issuer.

### Question 6 :

Describe the various Problems In Securitization.

(MTP Oct 20, MTP May 2020, MTP Oct 2019, MTP Apr 18, RTP Nov 20, Nov 19 suggested)

### Answer :

#### 1. Stamp Duty

- Stamp Duty is one of the obstacle in India
- Stamp duty which even goes up to 12% in some states of India
- Pass through certificate does not evidence any debt only able to receivable, they are exempted from stamp duty.

#### 2. Taxation

- In the absence of any specific provision relating to securitized instruments in Income Tax Act experts' opinion differ a lot
- Some are of opinion that SPV as a trustee is liable to be taxed in a representative capacity then others are of view that instead of SPV, investors will be taxed on their



share of income

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

### 3. Accounting

- Securitization is slated to be an off-balance sheet instrument but in true sense receivables are removed from originator's balance sheet
- Problem arises especially when assets are transferred without recourse

### 4. Lack of standardization

- Every originator following his own format for documentation and administration having lack of standardization is another obstacle in the growth of securitization

### 5. Inadequate Debt Market

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

### 6. Ineffective Foreclosure laws

- Foreclosure laws are not supportive to lending institutions
- Securitized instruments especially mortgaged backed securities less attractive as lenders face difficulty in transfer of property in event of default by the borrower

### Question 7 :

Explain briefly the various types of securitization instruments.

(MTP Apr 19, MTP March 18)

OR

Differentiate between PTS and PTC

(MTP Oct 18)

OR

Explain the Concept of Stripped Securities

(MTP March 19)





*Answer :*

### 1. Pass Through Certificates (PTCs)

- *Transfers the entire receipt of cash in the form of interest or principal repayment from the assets sold.*
- *Represent direct claim of the investors on all the assets that has been securitized through SPV*
- *All cash flows are transferred the investors*
- *It is a direct route any prepayment of principal is also proportionately distributed among the securities holders*
- *On completion of securitization by the final payment of assets, all the securities are terminated simultaneously*
- *Skewness of cash flows occurs in early stage if principals are repaid before the scheduled time*

### 2. Pay Through Security (PTS)

- *In PTCs all cash flows are passed, To overcome this limitation and limitation to single mature there is another structure i.e. PTS.*
- *This structure permits desynchronization of servicing of securities issued from cash flow generating from the asset.*
- *This structure also permits the SPV to reinvest surplus funds for short term as per their requirement*
- *This structure also provides the freedom to issue several debt tranches with varying maturities.*

### 3. Stripped Securities

- *Those two securities are as follows:*
  - (i) *Interest Only (IO) Securities*
  - (ii) *Principle Only (PO) Securities*
- *As each investor receives a combination of principal and interest, it can be stripped into two portion of Interest and Principle.*
- *IO securities receives only interest while PO security holder receives only principal.*





- In case yield to maturity in market rises, PO price tends to fall as borrower prefers to postpone the payment on cheaper loans. Whereas if interest rate in market falls, the borrower tends to repay the loans as they prefer to borrow fresh at lower rate of interest.
- In contrast, value of IO's securities increases when interest rate goes up in the market as more interest is calculated on borrowings. However, when interest rate due to prepayments of principals, IO's tends to fall.

### Question 8 :

Explain the pricing of the securitized instruments.

(MTP March 19)

Answer :

#### 1. From Originator's Angle

- Instruments can be priced at a rate at which originator has to incur an outflow
- If that outflow can be amortized over a period of time by investing the amount raised through securitization

#### 2. From Investor's Angle

- Security price can be determined by discounting best estimate of expected future cash flows
- This yield can also be estimated by referring the yield curve available for marketable securities

### Question 9 :

Explain securitisation in India.

(MTP Oct. 18)

Answer :

- In order to encourage securitization, the Government has come out with (SARFAESI) Act, 2002, to tackle menace of Non-Performing Assets (NPAs)



- With growing sophistication of financial products in Indian Capital Market, securitization has occupied an important place.
- The important highlight of the scenario of securitization in Indian Market is that it is dominated by a few players e.g. ICICI Bank, HDFC Bank, NHB etc.
- 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.



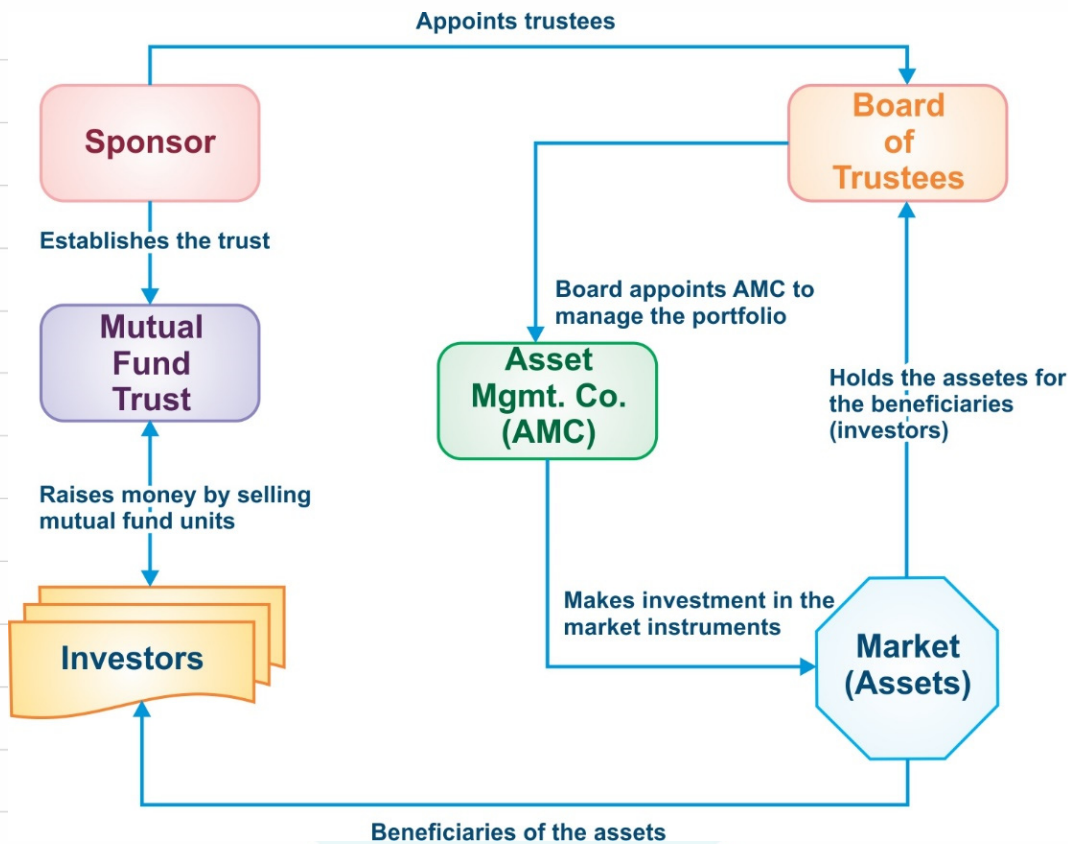
# Mutual Fund

STUDY SESSION 7

**Question 1 :**

Write short notes on the role of Mutual Funds in the Financial Market.

**Answer :**



- Opened new vistas to investors and imparted much needed liquidity to the system
- They have challenged the hitherto dominant role of the commercial banks in the financial market and national economy
- Role of MF in Finance Market is to provide access to the stock markets related investments to people with less money in their pocket
- Mutual funds are trusts that pool together resources from small investors to invest in capital market instruments like shares, debentures, bonds, treasury bills, commercial paper, etc.





- It is quite easy to construct a well-diversified portfolio of stocks, if you have 1,00,000 rupees to invest
  - How can one diversify his portfolio and manage risk if he has just 1,000 rupees to invest
- The only resort here is mutual funds that can provide access to the financial markets even to such small investors.
- Mutual funds also help small investors for step-by-step monthly saving/investing of smaller amounts.

### Question 2 :

Explain how to establish a Mutual Fund.

Answer :

- Required to be registered with the SEBI before it can collect funds from the public
- All mutual funds are governed by the same set of regulations and are subject to monitoring and inspections by the SEBI
- The Mutual Fund has to be established through the medium of a sponsor
- The sponsor should be a body corporate in the business of financial services for a period not less than 5 years, be financially sound and be a fit party to act as sponsor in the eyes of SEBI.
- Mutual Fund has to be established as either a trustee company or a Trust
- Instrument of trust shall be in the form of a deed.
- The trust deed shall be duly registered under the provisions of the Indian Registration Act, 1908
- An Asset Management Company, who holds an approval from SEBI, is to be appointed to manage the affairs of the Mutual Fund and it should operate the schemes of such fund
- The Asset Management Company is set up as a limited liability company, with a minimum net worth of ₹ 10 crores



- Sponsor should contribute at least 40% to the net worth of the Asset Management Company
- SEBI regulations require that at least two-thirds of the directors of the Trustee Company or board of trustees must be independent, they should not be associated with the sponsors
- 50 percent of the directors of AMC must be independent
- Appointment of the AMC can be terminated by majority of the trustees or by 75% of the unit holders of the concerned scheme
- AMC may charge the mutual fund with Investment Management and Advisory fees subject to prescribed ceiling
- The AMC may get the expenses on operation of the mutual fund reimbursed from the concerned scheme
- Mutual fund also appoints a custodian to have custody of securities held by the mutual fund under different schemes
- The custodian must be independent of the sponsor and the AMC.

### Question 3 :

Write a Short note on Classification of Mutual Funds.

Answer :

There are three different types of classification of mutual funds. (1) Functional (2) Portfolio and (3) Ownership. Each classification is mutually exclusive

1. Functional Classification : Funds are divided into: Open Ended and Close Ended

(i) Number Of Units

- ❖ The number of units outstanding under the schemes of Open Ended Funds keeps on changing
- ❖ A closed-end mutual fund is a publicly traded investment company with a limited number of units i.e. number of units under Close Ended Funds is fixed.

(ii) Maturity Period

- ❖ Open Ended schemes usually don't have a fixed maturity period whereas Close



*Ended Schemes have fixed maturity period*

(iii) NAV / Market Price

- ❖ The price at which an investor buys or sell shares of a Close Ended Fund after the NFO (New Fund Offer) is the market price, as determined by the demand and supply market principles.
- ❖ In contrast, the price at which an investor buys or sells shares of a mutual fund is the NAV of the Mutual Fund at the close of a given business day

(iv) Sale and Purchase

- ❖ The Units of Open Ended Funds are available for subscription and redemption on an ongoing basis
- ❖ An investor is allowed to join or withdraw from the fund at any time by the mutual fund companies at NAV related prices
- ❖ The Units of Close Ended Funds can be purchased or sold by the investor only from the secondary market i.e. stock market after the initial public offerings or there may be periodic repurchase at NAV related price by Mutual Fund itself

(v) Listing

- ❖ Open Ended Funds are not listed on any stock exchange
- ❖ While listing of close ended funds are compulsory on any Stock Exchange.

Example : The Unit Scheme -1964 (US- 64) was an open ended mutual fund scheme. Recently introduced Reliance Natural Resources Fund was also an Open Ended Mutual Fund . UTI has recently come up with new fund offer (NFO) with name "India Lifestyle Fund". This will be the three year close ended scheme .

2. Portfolio Classification: Funds are classified into Equity Funds, Debt Funds and Special Funds.

▪ **Equity Funds are invested in equity stocks. They are of the following types viz.**

- (i) Growth Funds : They seek to provide long term capital appreciation to the investor and are best to long term investors
- (ii) Aggressive Funds : They look for super normal returns for which investment is made in start-ups, IPOs and speculative shares. They are best to investors willing to take risks





- (iii) Income Funds : They seek to maximize present income of investors by investing in safe stocks paying high cash dividends and in high yield money market instruments. They are best to investors seeking current income
- (iv) Balanced Funds : They are a mix of growth and income funds. They buy shares for growth and bonds for income and best for investors seeking to strike golden mean.
- Debt Funds are of two types viz.
    - (i) Bond Funds : They invest in fixed income securities e.g. government bonds, corporate debentures, convertible debentures, money market. Investors seeking tax free income go in for government bonds while those looking for safe, steady income buy government bonds or high grade corporate bonds
    - (ii) Gilt Funds : They are mainly invested in Government securities
  - Special Funds are of four types viz.
    - (i) Index Funds : Every stock market has a stock index which measures the upward and downward sentiment of the stock market. Index Funds are low cost funds and influence the stock market. The investor will receive whatever the market deliver
    - (ii) International Funds : A mutual fund located in India to raise money in India for investing globally.
    - (iii) Offshore Funds : A mutual fund located in India to raise money globally for investing in India.
    - (iv) Sector Funds : They invest their entire fund in a particular industry e.g. utility fund— for utility industry like power, gas, public works
3. Ownership Classification : Funds are classified into Public Sector Mutual Funds, Private Sector Mutual Funds, Foreign Mutual Funds,
- 1) Public Sector Mutual Funds are sponsored by a company of the public sector.
  - 2) Private Sector Mutual Funds are sponsored by a company of the private sector.
  - 3) Foreign Mutual Funds are sponsored by companies for raising funds in India, operate from India and invest in India.



### Question 4 :

What are the various schemes under mutual fund?

Answer :

#### 1. Balanced Funds

- Balanced funds make strategic allocation to both debt as well as equities
- mainly works on the premise that while the debt portfolio of the scheme provides stability, the equity one provides growth
- It can be an ideal option for those who do not like total exposure to equity, but only substantial exposure.
- Such funds provide moderate returns to the investors as the investors are neither taking too high risk nor too low a risk.

#### 2. Equity Diversified Funds

A Diversified funds is a fund that contains a wide array of stocks. The fund manager of a diversified fund ensures a high level of diversification in its holdings, thereby reducing the amount of risk in the fund.

- a. Flexicap/Multicap Fund : These are by definition, diversified funds. The only difference is that unlike a normal diversified fund, the offer document of a multi-cap/flexi-cap fund generally spells out the limits for minimum and maximum exposure to each of the market caps.
- b. Contra fund : A contra fund invests in those out-of-favour companies that have unrecognized value. It is ideally suited for investors who want to invest in a fund that has the potential to perform in all types of market environments as it blends together both growth and value opportunities. Investors who invest in contra funds have an aggressive risk appetite.
- c. Index fund : An index fund seeks to track the performance of a benchmark market index like the BSE Sensex or S&P CNX Nifty. Simply put, the fund maintains the portfolio of all the securities in the same proportion as stated in the benchmark index and earns the same return as earned by the market.



d. **Dividend Yield fund** : A dividend yield fund invests in shares of companies having high dividend yields. Dividend yield is defined as dividend per share divided by the share's market price. Most of these funds invest in stocks of companies having a dividend yield higher than the dividend yield of a particular index, i.e., Sensex or Nifty. The prices of dividend yielding stocks are generally less volatile than growth stocks. Besides, they also offer the potential to appreciate.

Among diversified equity funds, dividend yield funds are considered to be a medium-risk proposition. However, it is important to note that dividend yield funds have not always proved resilient in short term corrective phases. Dividend yield schemes are of two types:

- **Dividend Payout Option** : Dividends are paid out to the unit holders under this option. However, the NAV of the units falls to the extent of the dividend paid out and applicable statutory levies.
- **Dividend Re-investment Option** : The dividend that accrues on units under option is reinvested back into the scheme at ex-dividend NAV. Hence investors receive additional units on their investments in lieu of dividends.

### 3. Equity Linked Tax Savings Scheme

- ELSS is one of the options for investors to save taxes under Section 80 C of the Income Tax Act
- Offer the perfect way to participate in the growth of the capital market, having a lock-in-period of three years
- ELSS has the potential to give better returns than any traditional tax savings instrument.
- By investing in an ELSS through a Systematic Investment Plan (SIP), one can not only avoid the problem of investing a lump sum towards the end of the year but also take advantage of "averaging".

### 4. Sector Funds

- These funds are highly focused on a particular industry
- The basic objective is to enable investors to take advantage of industry cycles.





- Since sector funds ride on market cycles, they have the potential to offer good returns if the timing is perfect
- However, they are bereft of downside risk protection as available in diversified funds.
- Sector funds should constitute only a limited portion of one's portfolio, as they are much riskier than a diversified fund. Besides, only those who have an existing portfolio should consider investing in these funds.
- For example, Real Estate Mutual Funds invest in real estate properties and earn income in the form of rentals, capital appreciation from developed properties.

#### 5. Thematic Funds

- A Thematic fund focuses on trends that are likely to result in the 'out-performance' by certain sectors or companies
- The theme could vary from multi-sector, international exposure, commodity exposure etc. Unlike a sector fund, theme funds have a broader outlook.
- the downside is that the market may take a longer time to recognize views of the fund house with regards to a particular theme, which forms the basis of launching a fund

#### 6. Arbitrage Funds

- Typically these funds promise safety of deposits, but better returns, tax benefits and greater liquidity. Pru-ICICI is the latest to join the list with its equities and derivatives funds
- The open ended equity scheme aims to generate low volatility returns by investing in a mix of cash equities, equity derivatives and debt markets.
- The fund seeks to provide better returns than typical debt instruments and lower volatility in comparison to equity
- This fund is aimed at an investor who seeks the return of small savings instruments, safety of bank deposits, tax benefits of RBI relief bonds and liquidity of a mutual fund.
- Arbitrage fund finally seeks to capitalize on the price differentials between the spot and the futures market.

- The other schemes in the arbitrage universe are Benchmark Derivative, JM Equity and Derivatives, Prudential ICICI Balanced, UTI Spread and Prudential ICICI Equity and Derivatives.

### 7. Hedge Fund

- A hedge fund (there are no hedge funds in India) is a *lightly regulated investment fund that escapes most regulations* by being a sort of a private investment vehicle being offered to selected clients.
- The big *difference* between a hedge fund and a mutual fund is that the former does not reveal anything about its operations publicly and charges a performance fee.
- Typically, if it outperforms a benchmark, it take a cut off the profits.
- Hedge funds are *aggressively managed portfolio of investments* which use advanced investment strategies such as leveraged, long, short and derivative positions in both domestic and international markets with the goal of generating high returns
- It is important to note that hedging is actually the *practice of attempting to reduce risk*, but the goal of most hedge funds is to maximize return on investment.

### 8. Cash Fund

- Cash Fund is an *open ended liquid scheme* that aims to generate returns with *lower volatility and higher liquidity* through a portfolio of debt and money market instrument.
- The fund will have *retail institutional and super institutional plans*. Each plan will offer growth and dividend options
- The *minimum initial investment* for the institutional plan is ₹ 1 crore and the super institutional is ₹ 25 crore. For the retail plan, the *minimum initial investment* is ₹ 5,000/-.
- The fund has *no entry or exit loads*.
- Investors can invest even through the Systematic Investment Planning (SIP) route with a minimum amount of ₹ 500 per instalment with the total of all instalments not being less than ₹ 5,000/-.



### Question 5 :

What is exchange traded fund ? What are its advantages ?

(RTP Nov 19)

### Answer :

Mutual Fund

- An Exchange Traded Fund (ETF) is a hybrid product that combines the features of an index fund.
- These funds are listed on the stock exchanges and their prices are linked to the underlying index.
- ETFs can be bought and sold like any other stock on an exchange. In other words, ETFs can be bought or sold any time during the market hours at prices that are expected to be closer to the NAV at the end of the day
- Therefore, one can invest at real time prices as against the end of the day prices as is the case with open-ended schemes.
- There is no paper work involved for investing in an ETF.
- Can be bought like any other stock by just placing an order with a broker
- ETFs may be attractive as investments because of their low costs, tax efficiency, and stock-like features
- ETF combines the valuation feature of a mutual fund or unit investment trust, which can be bought or sold at the end of each trading day for its net asset value, with the tradability feature of a closed-end fund, which trades throughout the trading day at prices that may be more or less than its net asset value.

Following types of ETF products are available in the market:

- Index ETFs : Most ETFs are index funds that hold securities and attempt to replicate the performance of a stock market index.
- Commodity ETFs : Commodity ETFs invest in commodities, such as precious metals and futures
- Bond ETFs : Exchange-traded funds that invest in bonds are known as bond ETFs. They thrive during economic recessions because investors pull their money out of the stock market and into bonds (for example, government treasury bonds or those issues by







companies regarded as financially stable). Because of this cause and effect relationship, the performance of bond ETFs may be indicative of broader economic conditions.

- **Currency ETFs** : The funds are total return products where the investor gets access to the FX spot change, local institutional interest rates and a collateral yield.

Some other important advantages of ETF are as follows:

- 1) It gives an investor the benefit of investing in a commodity without physically purchasing the commodity like gold, silver, sugar etc.
- 2) It is launched by an asset management company or other entity.
- 3) The investor does not need to physically store the commodity or bear the costs of upkeep which is part of the administrative costs of the fund.
- 4) An ETF combines the valuation feature of a mutual fund or unit investment trust, which can be bought or sold at the end of each trading day for its net asset value, with the tradability feature of a closed ended fund, which trades throughout the trading day at prices that may be more or less than its net asset value.

**Question 6 :**

**What are the advantages of Mutual Fund?**

**Answer :**

- (a) **Professional Management** : The funds are managed by skilled and professionally experienced managers with a backup of a Research team.
- (b) **Diversification** : Mutual Funds offer diversification in portfolio which reduces the risk.
- (c) **Convenient Administration** : There are no administrative risks of share transfer, as many of the Mutual Funds offer services in a demat form which save investor's time and delay.
- (d) **Higher Returns** : Over a medium to long-term investment, investors always get higher returns in Mutual Funds as compared to other avenues of investment. This is already seen from excellent returns, Mutual Funds have provided in the last few years. However, investors are cautioned that such high returns riding on the IT boom should not be taken as regular returns and therefore one should look at the average returns provided by the Mutual Funds particularly in the equity schemes during the last couple of years.





- (e) Low Cost of Management : No Mutual Fund can increase the cost beyond prescribed limits of 2.5% maximum and any extra cost of management is to be borne by the AMC.
- (f) Liquidity : In all the open ended funds, liquidity is provided by direct sales / repurchase by the Mutual Fund and in case of close ended funds, the liquidity is provided by listing the units on the Stock Exchange.
- (g) Transparency : The SEBI Regulations now compel all the Mutual Funds to disclose their portfolios on a half-yearly basis. However, many Mutual Funds disclose this on a quarterly or monthly basis to their investors. The NAVs are calculated on a daily basis in case of open ended funds and are now published through AMFI in the newspapers.
- (h) Other Benefits : Mutual Funds provide regular withdrawal and systematic investment plans according to the need of the investors. The investors can also switch from one scheme to another without any load.
- (i) Highly Regulated : Mutual Funds all over the world are highly regulated and in India all Mutual Funds are registered with SEBI and are strictly regulated as per the Mutual Fund Regulations which provide excellent investor protection.
- (j) Economies of scale : The way mutual funds are structured gives it a natural advantage. The "pooled" money from a number of investors ensures that mutual funds enjoy economies of scale; it is cheaper compared to investing directly in the capital markets which involves higher charges.  
This also allows retail investors access to high entry level markets like real estate, and also there is a greater control over costs.
- (k) Flexibility : There are a lot of features in a regular mutual fund scheme, which imparts flexibility to the scheme. An investor can opt for Systematic Investment Plan (SIP), Systematic Withdrawal Plan etc. to plan his cash flow requirements as per his convenience. The wide range of schemes being launched in India by different mutual funds also provides an added flexibility to the investor to plan his portfolio accordingly.

### Question 7 :

What are the drawbacks of Mutual Fund?



Answer :

(a) No guarantee of Return : There are three issues involved:

- (i) All Mutual Funds cannot be winners. There may be some who may underperform the benchmark index i.e. it may not even perform well as a novice who invests in the stocks constituting the index.
- (ii) A mutual fund may perform better than the stock market but this does not necessarily lead to a gain for the investor. The market may have risen and the mutual fund scheme increased in value but the investor would have got the same increase had he invested in risk free investments than in mutual fund.
- (iii) Investors may forgive if the return is not adequate. But they will not do so if the principal is eroded. Mutual Fund investment may depreciate in value.

(b) Diversification -

- Though diversification minimizes risk, it does not ensure maximizing returns
- The returns that mutual funds offer are less than what an investor can achieve
- By holding a large number of different investments, mutual funds tend to do neither exceptionally well nor exceptionally poor.

(c) Selection of Proper Fund -

- It may be easier to select the right share rather than the right fund.
- For stocks, one can base his selection on the parameters of economic, industry and company analysis
- In case of mutual funds, past performance is the only criteria to fall back upon. But past cannot predict the future

(d) Cost Factor -

- Mutual Funds carry a price tag. Fund Managers are the highest paid executives.
- While investing, one has to pay for entry load and when leaving he has to pay for exit load. Such costs reduce the return from mutual fund
- The fees paid to the Asset Management Company is in no way related to performance.



(e) Unethical Practices -

- Mutual Funds may not play a fair game.
- Each scheme may sell some of the holdings to its sister concerns for substantive notional gains and posting NAVs in a formalized manner.

(f) Taxes -

- When making decisions about your money, fund managers do not consider your personal tax situations
- For example when a fund manager sells a security, a capital gain tax is triggered, which affects how profitable the individual is from sale. It might have been more profitable for the individual to defer the capital gain liability.

(g) Transfer Difficulties -

- Complications arise with mutual funds when a managed portfolio is switched to a different financial firm.
- Sometimes the mutual fund positions have to be closed out before a transfer can happen
- This can be a major problem for investors. Liquidating a mutual fund portfolio may increase risk, increase fees and commissions, and create capital gains taxes.

Question 8 :

What are the signals that indicate that is time for an investor to exit a mutual fund scheme?

Answer :

- 1) When the mutual fund consistently under performs the broad based index, it is high time that it should get out of the scheme.
- 2) When the mutual fund consistently under performs its peer group instead of it being at the top. In such a case, it would have to pay to get out of the scheme and then invest in the winning schemes.
- 3) When the mutual fund changes its objectives e.g. instead of providing a regular income to the investor, the composition of the portfolio has changed to a growth fund mode which is not in tune with the investor's risk preferences.



- 4) When the investor changes his objective of investing in a mutual fund which no longer is beneficial to him.
- 5) When the fund manager, handling the mutual fund schemes, has been replaced by a new entrant whose image is not known.

**Question 9 :**

**Distinguish between Open-ended and Close-ended Schemes.**

**Answer :**

- Open Ended Scheme do not have maturity period. These schemes are available for subscription and repurchase on a continuous basis. Investor can conveniently buy and sell unit. The price is calculated and declared on daily basis. The calculated price is termed as NAV. The buying price and selling price is calculated with certain adjustment to NAV. The key future of the scheme is liquidity.
- Close Ended Scheme has a stipulated maturity period normally 5 to 10 years. The Scheme is open for subscription only during the specified period at the time of launce of the scheme. Investor can invest at the time of initial issue and thereafter they can buy or sell from stock exchange where the scheme is listed. To provide an exit rout some close-ended schemes give an option of selling bank (repurchase) on the basis of NAV. The NAV is generally declared on weekly basis.
- The points of difference between the two types of funds can be explained as under

| Parameter          | Open Ended Fund          | Closed Ended Fund                       |
|--------------------|--------------------------|---|
| Fund Size          | Flexible                 | Fixed                                   |
| Liquidity Provider | Fund itself              | Stock Market                            |
| Sale Price         | At NAV plus load, if any | Significant Premium/<br>Discount to NAV |
| Availability       | Fund itself              | Through Exchange where listed           |
| Intra-Day Trading  | Not possible             | Expensive                               |



**Question 10 :**

Write short notes on Money market mutual fund.

**Answer :**

- An important part of financial market is Money market. It is a market for short-term money.
- It plays a crucial role in maintaining the equilibrium between the short-term demand and supply of money.
- Invest in safe highly liquid instruments included in commercial papers certificates of deposits and government securities
- The Money Market Mutual Fund (MMMMF) schemes generally provide high returns and highest safety to the ordinary investors
- MMMF schemes are active players of the money market.
- Channelize the idle short funds, particularly of corporate world, to those who require such funds.
- Process helps those who have idle funds to earn some income without taking any risk and with surety
- Short-term/emergency requirements of various firms are met by such Mutual Funds.
- Participation of such Mutual Funds provide a boost to money market and help in controlling the volatility

**Question 11 :**

Differentiate between 'Off-share funds' and 'Asset Management Mutual Funds'.

**Answer :**

| Off-Shore Funds   | Mutual Funds  |
|---|---|
| Raising of Money internationally and investing money domestically (in India). | Raising of Money domestically as well as investing money domestically (in India). |
| Number of Investors is very few.  | Number of Investors is very large.  |







|   |  |
|---|--|
| Per Capita investment is very high as investors are HNIs. | Per Capita investment is very low as investors as meant for retail/ small investors. |
| Investment Agreement is basis of management of the fund.  | Offer Document is the basis of management of the fund.                               |

### Question 12 :

Explain the concept of side pocketing in mutual funds.

(RTP May 19)

### Answer :

- In simple words, a Side Pocketing in Mutual Funds leads to separation of risky assets from other investments and cash holdings. The purpose is to make sure that money invested in a mutual fund, which is linked to stressed assets, gets locked, until the fund recovers the money from the company or could avoid distress selling of illiquid securities.
- The modus operandi is simple. Whenever, the rating of a mutual fund decreases, the fund shifts the illiquid assets into a side pocket so that current shareholders can be benefitted from the liquid assets. Consequently, the Net Asset Value (NAV) of the fund will then reflect the actual value of the liquid assets.
- Side Pocketing is beneficial for those investors who wish to hold on to the units of the main funds for long term. Therefore, the process of Side Pocketing ensures that liquidity is not the problem even in the circumstances of frequent allotments and redemptions.
- Side Pocketing is quite common internationally. However, Side Pocketing has also been resorted to bereft the investors of genuine returns.
- In India recent fiasco in the Infrastructure Leasing and Financial Services (IL&FS) has led to many discussions on the concept of side pocketing as IL&FS and its subsidiaries have failed to fulfil its repayments obligations due to severe liquidity crisis.
- The Mutual Funds have given negative returns because they have completely written off their exposure to IL&FS instruments.



**Question 13 :**

Explain Direct Plans in Mutual Funds.

(MTP Apr 19)

**Answer :**

- (AMC) have been permitted to make direct investments in mutual fund schemes even before 2011 But, there were no separate plans for these investments.
- These investments were made in distributor plan itself and were tracked with single NAV – one of the distributor plans.
- Therefore, an investor was forced to buy mutual funds based on the NAV of the distributor plans. However, things changed with introduction of direct plans by SEBI on January 1, 2013.
- Mutual fund direct plans are those plan where Asset Management Companies or mutual fund Houses do not charge distributor expenses, trail fees and transaction charges.
- NAV of the direct plan are generally higher in comparison to a regular plan.
- Studies have shown that the 'Direct Plans' have performed better than the 'Regular Plans' for almost all the mutual fund schemes.



# Derivatives Analysis & Valuation

STUDY SESSION 8

## Question 1 :

What is Derivatives, its uses & Difference between Cash & Derivative Market?

### Answer :

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

Main users of Derivatives are as follows:

|     | Users                  | Purpose   |
|-----|------------------------|---|
| (a) | Corporation            | To hedge currency risk and inventory risk   |
| (b) | Individual Investors   | For speculation, hedging and yield enhancement  |
| (c) | Institutional Investor | For hedging asset allocation, yield enhancement and to avail arbitrage opportunities. |
| (d) | Dealers                | For hedging position taking, exploiting inefficiencies and earning dealer spreads.    |





The basic differences between Cash and the Derivative market are enumerated below:-

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

**Question 2 :**

**Difference between Forward & Future Contracts.**

(RTP Nov 2020)

**Answer :**

| S.No | Features | Forward  | Futures  |
|------|----------|--|--|
| 1    | Trading  | Forward contracts are traded on personal basis or on telephone or otherwise. | Futures Contracts are traded in a competitive arena. |



|   |                     |  |   |
|---|---------------------|--|---|
| 2 | Size of Contract    | Forward contracts are individually tailored and have no standardized size                    | Futures contracts are standardized in terms of quantity or amount as the case may be  |
| 3 | Organized exchanges | Forward contracts are traded in an over the counter market.                                  | Futures contracts are traded on organized exchanges with a designated physical location   |
| 4 | Settlement          | Forward contracts settlement takes place on the date agreed upon between the parties.        | Futures contracts settlements are made daily via. Exchange's clearing house.  |
| 5 | Delivery date       | Forward contracts may be delivered on the dates agreed upon and in terms of actual delivery. | Futures contracts delivery dates are fixed on cyclical basis and hardly takes place. However, it does not mean that there is no actual delivery.                  |
| 6 | Transaction costs   | Cost of forward contracts is based on bid - ask spread.                                      | Futures contracts entail brokerage fees for buy and sell order  |
| 7 | Marking to market   | Forward contracts are not subject to marking to market                                       | Futures contracts are subject to marking to market in which the loss on profit is debited or credited in the margin account on daily basis due to change in price |



|   |             |  |   |
|---|-------------|--|---|
| 8 | Margins     | Margins are not required in forward contract.  | In futures contracts every participant is subject to maintain margin as decided by the exchange authorities       |
| 9 | Credit risk | In forward contract, credit risk is born by each party and, therefore, every party has to bother for the creditworthiness. | In futures contracts the transaction is a two way transaction, hence the parties need not to bother for the risk. |

### Question 3 :

Write a short note on Marking to Market?

Answer :

- Implies the process of recording the investments in traded securities at a value, which reflects the market value of securities on the reporting date
- In the context of derivatives trading, futures contracts are marked to market on periodic (or daily) basis.
- At the end of a trading session, all outstanding contracts are repriced at the settlement price of that session
- Forward contracts, the future contracts are repriced every day
- Any loss or profit resulting from repricing would be debited or credited to the margin account of the broker.
- Provides an opportunity to calculate the extent of liability on the basis of repricing.
- Futures contracts provide better risk management measure as compared to forward contracts.

### Question 4 :

Stock index futures is most popular financial derivatives over stock Futures.





**Answer :**

Stock index futures is most popular financial derivatives over stock futures due to following reasons:

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



### Question 5 :

What are the assumptions of Black-Scholes Model?

Answer :

- 1) European Options are considered,
- 2) No transaction costs,
- 3) Short term interest rates are known and are constant,
- 4) Stocks do not pay dividend,
- 5) Stock price movement is similar to a random walk,
- 6) Stock returns are normally distributed over a period of time, and
- 7) The variance of the return is constant over the life of an Option.

### Question 6 :

Distinction between Options and Futures.

Answer :

| S.No. | Options  | Futures   |
|-------|--|---|
| a     | Only the seller (writer) is obliged to perform                                       | Both the parties are obligated to perform   |
| b     | Premium is paid by the buyer to the seller at the inception of the contract          | No premium is paid by any party.  |
| c     | Loss is restricted while there is unlimited gain potential for the option buyer.     | There is potential/risk for unlimited gain/loss for the futures buyer.                |
| d     | An American option contract can be exercised any time during its period by the buyer | A futures contract has to be honoured by both the parties only on the date specified. |



**Question 7 :**

What are the Factors affecting the value of an Option?

**Answer :**

There are a number of different mathematical formulae, or models, that are designed to compute the fair value of an option. Here are the general effects the variables have on an option's price:

**(a) Price of the Underlying:**

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

**(b) Time:**

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

**(c) Volatility:**

- The beginning point of understanding volatility is a measure called statistical (sometimes called historical) volatility, or SV for short. SV is a statistical measure of the past price movements of the stock; it tells you how volatile the stock has actually been over a given period of time.

**(d) Interest Rate :**

- Greater the interest rates, the present value of the future exercise price is less

**Question 8 :**

Define the term Greeks with respect to options.





Answer :

### 1) Delta

- A by-product of the Black-Scholes model is the calculation of the delta.
- degree to which an option price will move given a small change in the underlying stock price.
- A deeply out-of-the-money call will have a delta very close to zero; a deeply in-the-money call will have a delta very close to 1.
- The formula for a delta of a European call on a non-dividend paying stock is:  $\Delta = N(d_1)$
- Call deltas are positive; put deltas are negative, reflecting the fact that the put option price and the underlying stock price are inversely related. The put delta equals the call delta - 1.
- The delta is often called the hedge ratio: If you have a portfolio short 'n' options then n multiplied by the delta gives you the number of shares you would need to create a riskless position - i.e. a portfolio which would be worth the same whether the stock price rose by a very small amount or fell by a very small amount.
- "delta neutral" portfolio any gain in the value of the shares held due to a rise in the share price would be exactly offset by a loss on the value of the calls written, and vice versa

### 2) Gamma

- It measures how fast the delta changes for small changes in the underlying stock price. i.e. the delta of the delta.
- If you are hedging a portfolio using the delta-hedge technique described under "Delta", then you will want to keep gamma as small as possible
- If gamma is too large, a small change in stock price could wreck your hedge
- Adjusting gamma, however, can be tricky and is generally done using options.

### 3) Theta

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



- Unless you and your portfolio are travelling at close to the speed of light the passage of time is constant and inexorable.
- Hedging a portfolio against time decay, the effects of which are completely predictable, would be pointless

#### 4) Rho

- The change in option price given a one percentage point change in the risk-free interest rate. It is sensitivity of option value to change in interest rate.
- Rho indicates the absolute change in option value for a one percent change in the interest rate
- For example, a Rho of .060 indicates the option's theoretical value will increase by .060 if the interest rate is decreased by 1.0.

#### 5) Vega

- Sensitivity of option value to change in volatility. Vega indicates an absolute change in option value for a one percent change in volatility
- For example, a Vega of .090 indicates an absolute change in the option's theoretical value will increase by .090 if the volatility percentage is increased by 1.0 or decreased by .090 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.

#### Question 9 :

Write a short note on Embedded Derivatives.

(May 18 Suggested)

#### Answer :

- An embedded derivative is a derivative instrument that is embedded in another contract – the host contract.
- An embedded derivative that modifies an instrument's inherent risk (such as a fixed to floating interest rate swap) would be considered closely related. Conversely, an embedded



derivative that changes the nature of the risks of a contract is *not closely related*.

- Most equity- or commodity-linked features embedded in a debt instrument will not be closely related.
- The economic characteristics and risks of an embedded derivative are closely related to the economic characteristics and risks of the host contract
- A derivative embedded in a host lease contract is closely related to the host contract if the embedded derivative comprises contingent rentals based on related sales;

#### Fair Valuing Embedded Derivatives :

- separated from the host contract are accounted for at fair value with changes in fair value taken through the income statement. Published price quotations in an active market are normally the best evidence of fair value.
- Valuation techniques are used to determine the fair value of the derivative if there is no active market that matches the exact terms of the embedded derivative.
- In the case of option derivatives (e.g. puts & calls), the embedded derivatives should be separated from the host contract and valued based on the stated terms of the option.

#### **Question 10 :**

**How is a stock market index calculated? Indicate any two important stock market indices.**

#### **Answer :**

1. A base year is set along with a basket of base shares.
2. The changes in the market price of these shares is calculated on a daily basis.
3. The shares included in the index are those shares which are traded regularly in high volume.
4. In case the trading in any share stops or comes down then it gets excluded and another company's shares replace it.
5. Following steps are involved in calculation of index on a particular date:
  - Calculate market capitalization of each individual company comprising the index.
  - Calculate the total market capitalization by adding the individual market capitalization of all companies in the index.





- Computing *index of next day* requires the index value and the total market capitalization of the previous day and is computed as follows:
- $\text{Index Value} = \text{Index on Previous Day} \times \left( \frac{\text{Free Float Market Capitalization for Current Day}}{\text{Free Float Market Capitalization of the Previous Day}} \right)$
- It should also be noted that Indices may also be *calculated using the price weighted method*. Here the share prices of the constituent companies form the weights. However, almost all equity indices world-wide are calculated using the market capitalization weighted method.

Each stock exchange has a *flagship index* like in India Sensex of BSE and Nifty of NSE and outside India is Dow Jones, FTSE etc.

### Question 11 :

Write short note on Green shoe option.

Answer :

- It is an option that *allows the underwriting of an IPO* to sell additional shares if the demand is high.
- It can be understood as an option that *allows the underwriter for a new issue* to buy and resell additional shares up to a certain pre-determined quantity.
- Looking to the *exceptional interest* of investors in terms of *over-subscription* of the issue, certain provisions are made to issue additional shares or bonds to underwriters for distribution.
- In common parlance, it is the *retention of over-subscription* to a certain extent. It is a *special feature of euro-issues*. In euro-issues the international practices are followed.
- In the Indian context, *green shoe option* has a limited connotation. SEBI guidelines governing public issues *contain appropriate provisions for accepting over-subscriptions*, subject to a ceiling, say, 15 per cent of the offer made to public. In certain situations, the *green-shoe option* can even be more than 15 per cent.



### Question 12 :

What is the significance of an underlying in relation to a derivative instrument?

Answer :

- The underlying may be a share, a commodity or any other asset which has a marketable value which is subject to market risks. The importance of underlying in derivative instruments is as follows
  - All derivative instruments are dependent on an underlying to have value
  - The change in value in a forward contract is broadly equal to the change in value in the underlying
  - In the absence of a valuable underlying asset the derivative instrument will have no value
- On maturity, the position of profit/loss is determined by the price of underlying instruments. If the price the underlying is higher than the contract price the buyer makes a profit. If the price is lower, the buyer suffers a loss

### Question 13 :

Define Intrinsic value and the time value of an Option.

Answer :

Intrinsic value of an option and the time value of an option are primary determinants of an option's price.

- Intrinsic value
  - value that any given option would have if it were exercised today.
  - difference between the option's strike price (x) and the stock actual current price (c.p).
  - In the case of a call option, one can calculate the intrinsic value by taking  $CP - X$ . If the result is greater than Zero then the amount left over after subtracting is intrinsic value
  - An option's intrinsic value can never be below zero





- To determine the intrinsic value of a put option, simply reverse the calculation to  $X - CP$
- Time Value
  - It is defined as any value of an option other than the intrinsic value.
  - Time value is basically the risk premium that the seller requires to provide the option buyer with the right to buy/sell the stock up to the expiration date.
  - component may be regarded as the Insurance premium of the option. This is also known as "Extrinsic value."
  - The time value of an option is directly related to how much time an option has until expiration.
  - The more time an option has until expiration, greater the chances of option ending up in the money.

#### Question 14 :

- (i) What are Stock futures?
- (ii) What are the opportunities offered by Stock futures?
- (iii) How are Stock futures settled?

#### Answer :

- (i) Stock future is a financial derivative product where the underlying asset is an individual stock. It is also called equity future. This derivative product enables one to buy or sell the underlying Stock on a future date at a price decided by the market forces today.
- (ii) Stock futures offer a variety of usage to the investors Some of the key usages are mentioned below.

Investors can take long-term view on the underlying stock using stock futures.

- (a) Stock futures offer high leverage. This means that one can take large position with less capital. For example, paying 20% initial margin one can take position for 100%, i.e., 5 times the cash outflow.
- (b) Futures may look over-priced or under-priced compared to the spot price and can offer opportunities to arbitrage and earn riskless profit.







- (c) When used efficiently, single-stock futures can be effective risk management tool. For instance, an investor with position in cash segment can minimize either market risk or price risk of the underlying stock by taking reverse position in an appropriate futures contract.
- (iii) Earlier stock futures were used to be settled through delivery. Currently, equity derivatives are cash settled, i.e. difference between entry price and exit price. However, recently, SEBI is planning to make physical settlement mandatory in a phased manner.

### Question 15 :

Write short note on Options.

Answer :

- An option is a claim without any liability. It is a claim contingent upon the occurrence of certain conditions and, therefore, option is a contingent claim.
- More specifically, an option is contract that gives the holder a right, without any obligation, to buy or sell an asset at an agreed price on or before a specified period of time.
- The option to buy an asset is known as a call option and the option to sell an asset is called put option. The price at which option can be exercised is called as exercise price or strike price.
- Based on exercising the option it can be classified into two categories:
  - European Option: When an option is allowed to be exercised only on the maturity date.
  - American Option: When an option is exercised any time before its maturity date.
  - When an option holder exercises his right to buy or sell it may have three possibilities
  - An option is said to be in the money when it is advantageous to exercise it.
  - When exercise is not advantageous it is called out of the money
  - When option holder does not gain or lose it is called at the money



- The holder of an option has to pay a price for obtaining call/put option. This price is known as option premium. This price has to be paid whether the option is exercised or not.

**Question 16 :**

**What are the features of Futures Contract?**

**Answer :**

Future contracts can be characterized by:-

- These are traded on organized exchanges.
- Standardised contract terms like the underlying assets, the time of maturity and the manner of maturity etc.
- Associated with clearing house to ensure smooth functioning of the market.
- Margin requirements and daily settlement to act as further safeguard i.e., marked to market.
- Existence of regulatory authority.
- Every day the transactions are marked to market till they are re-wound or matured.

Future contracts being traded on organized exchanges, impart liquidity to a transaction. The clearing house being the counter party to both sides or a transaction, provides a mechanism that guarantees the honouring of the contract and ensuring very low level of default.

**Question 17 :**

**Write a short note on Straddles and Strangles.**

**Answer :**

Straddles:

- with which the investor holds a position in both a call and put with the same strike price and expiration date.
- Straddles are a good strategy to pursue if an investor believes that a stock's price will move significantly, but is unsure as to which direction. The stock price must move significantly if the investor is to make a profit. small movement in price occur in either direction, the investor will experience a loss.



- Straddle is extremely risky to perform.
- Additionally, on stocks that are expected to jump, the market tends to price options at a higher premium, which ultimately reduces the expected payoff should the stock move significantly.

### Strangles

- The strategy involves buying an out-of-the-money call and an out-of-the-money put option.
- A strangle is generally less expensive than a straddle as the contracts are purchased out of the money.
- Strangle is an unlimited profit, limited risk strategy that is taken when the options trader thinks that the underlying stock will experience significant volatility in the near term. It has two different strike prices.

### Question 18 :

Explain cash settlement and physical settlement in derivative contracts and their relative advantages and disadvantages.

(RTP May 19)

### Answer :

- The physical settlement in case of derivative contracts means that underlying assets are actually delivered on the specified delivery date.
- In case of cash settlement, the seller of the derivative contract does not deliver the underlying asset but transfers the Cash.
- The main advantage of cash settlement in derivative contract is high liquidity because of more derivative volume in cash segment.
- The underlying stocks in derivative contracts has constricted bid-ask spreads. And, trading in such stocks can be effected at lower impact cost.
- A liquid derivative market facilitates the traders to do speculation. The speculative trading may worry the regulators but it is also true that without speculative trading, it will not be possible for the derivative market to stay liquid.





- One advantage of physical settlement is that it is not subject to manipulation by both the parties to the derivative contract.
- This is so because the entire activity is monitored by the broker and the clearing exchange.
- And main disadvantage of physical delivery is that it is almost impossible to short sell a stock in the Indian Market.
- Therefore, in the end, it can be concluded that, though, physical settlement in derivative contract does curb manipulation it also affects the liquidity in the derivative segment.

**Question 19 :**

**Describe the Characteristics of Financial Instruments.**

(MTP March 19)

**Answer :**

1. **Liquidity:** Financial instruments provide liquidity. These can be easily and quickly converted into cash.
2. **Marketing:** Financial instruments facilitate easy trading on the market. They have a ready market.
3. **Collateral value:** Financial instruments can be pledged for getting loans.
4. **Transferability:** Financial instruments can be transferred from one person to another.
5. **Maturity period:** The maturity period of financial instruments may be short term, medium term or long term.
6. **Transaction cost:** Financial instruments involve buying and selling cost. The buying and selling costs are called transaction costs.
7. **Risk:** Financial instruments carry risk. Equity based instruments are riskier in comparison to debt based instruments because the payment of dividend is uncertain.
8. **Future trading:** Financial instruments facilitate future trading so as to cover risks arising out of price fluctuations, interest rate fluctuations etc.



NOTES

Derivatives Analysis & Valuation



# Foreign Exchange Exposure & Risk Management

STUDY SESSION 9

**Question 1 :**

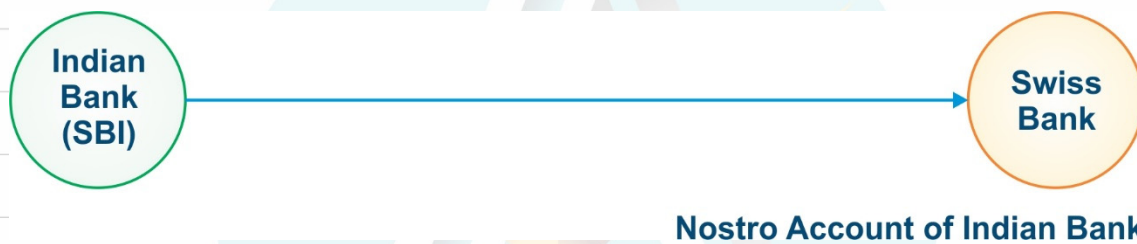
Write a note on Nostro, Vostro & Loro Accounts.

**Answer :**

Nostro Account [Ours account with you]

This is a current account maintained by a domestic bank/dealer with a foreign bank in foreign currency.

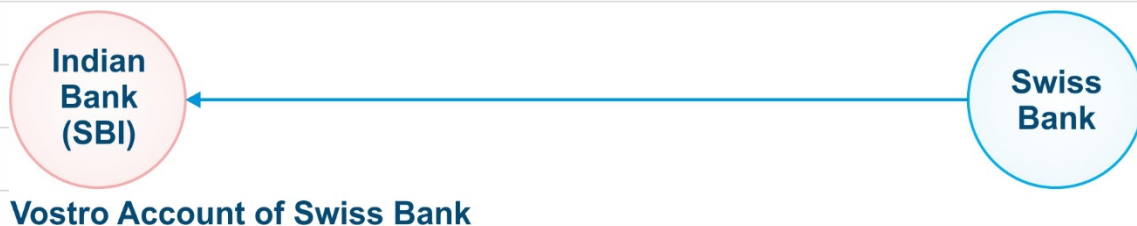
**Example:** Current account of SBI bank (an Indian Bank) with swizz bank in Swizz Franc. (CHF) is a Nostro account.



Vostro Account [Yours account with us]

This is a current account maintained by a foreign bank with a domestic bank/dealer in Rupee currency

**Example:** Current account of Swizz bank in India with SBI bank in Rupee (₹) currency



Loro Account [Our account of their Money with you]

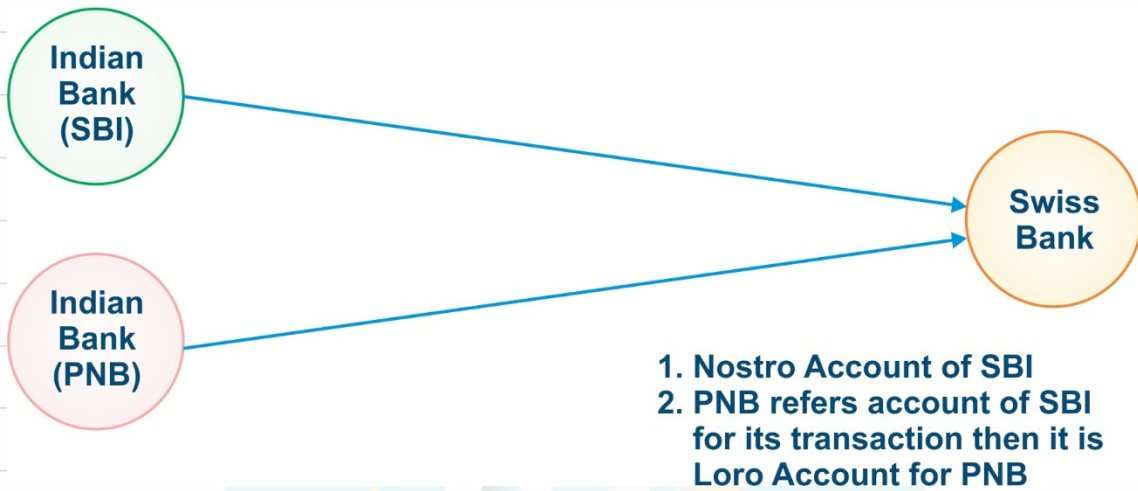
This is a current account maintained by one domestic bank on behalf of other domestic bank in foreign bank in a foreign currency.





In other words, Loro account is a Nostro account for one bank who opened the bank and Loro account for other bank who refers first one account.

**Example:** SBI opened Current account with swizz bank. If PNB refers that account of SBI for its correspondence, then it is called Loro account for PNB and it is Nostro account for SBI.



**Note:**

- SPOT purchase/sale of CHF affects both exchange position as well as Nostro account.
- However, forward purchase/sale affects only the exchange position.

1. Nostro A/c (Cash A/c) in Foreign Currency

|             |                                     |                                     |
|-------------|-------------------------------------|-------------------------------------|
| Particulars | Dr. [Debit] outflow of Dollars (FC) | Cr. [Credit] Inflow of Dollars (FC) |
|-------------|-------------------------------------|-------------------------------------|

2.

|             |                      |                        |
|-------------|----------------------|------------------------|
| Particulars | Long Dollar Buy (FC) | Short Dollar Sell (FC) |
|-------------|----------------------|------------------------|

**Question 2 :**

What is the meaning of:

- Interest Rate Parity
- Purchasing Power Parity? (RTP Nov 19)
- International Fishers Effect (IFE)





Answer :

### Interest Rate Parity (IRP)

- The size of the forward premium (or discount) should be equal to the interest rate differential between the two countries of concern".
- When interest rate parity exists, covered interest arbitrage is not feasible, because any interest rate advantage in the foreign country will be offset by the discount on the forward rate.
- The act of covered interest arbitrage would generate a return that is no higher than what would be generated by a domestic investment.
- The Covered Interest Rate Parity equation is given by:
  - $(1 + r_D)$  = Amount that an investor would get after a unit period by investing a rupee in the domestic market
  - $r_F$  rate of interest and  $F$  is the amount that an investor by investing in the foreign market
  - $r_D$  that the investment of one rupee yield same return in the domestic as well as in the foreign market

### Purchasing Power Parity (PPP)

- Purchasing Power Parity theory focuses on the 'inflation- exchange rate' relationship. There are two forms of PPP theory
- Absolute Form
  - Also called the 'Law of One Price' suggests that "prices of similar products of two different countries should be equal when measured in a common currency".
  - If a discrepancy in prices as measured by a common currency exists, the demand should shift so that these prices should converge.
- Relative Form
  - Alternative version that accounts for the possibility of market imperfections such as transportation costs, tariffs, and quotas.
  - It suggests that 'because of these market imperfections, prices of similar products of different countries will not necessarily be the same when measured in a common currency.'





➤ It states that the rate of change in the prices of products should be somewhat similar when measured in a common currency, as long as the transportation costs and trade barriers are unchanged.

- The formula for computing the forward rate taking the inflation rates in domestic and foreign countries is as follows:
- Where  $F$  = Forward Rate of Foreign Currency and  $S$  = Spot Rate
- $i_D$  = Domestic Inflation Rate and  $i_F$  = Inflation Rate in foreign country
- Thus PPP theory states that the exchange rate between two countries reflects the relative purchasing
- Power of the two countries i.e. the price at which a basket of goods can be bought in the two countries.

### International Fisher Effect (IFE)

- International Fisher Effect theory uses interest rate rather than inflation rate differentials
- To explain why exchange rates change over time, but it is closely related to the Purchasing Power Parity (PPP) theory because interest rates are often highly correlated with inflation rates.
- Nominal risk-free interest rates contain a real rate of return and anticipated inflation
  - This means if investors of all countries require the same real return, interest rate differentials between countries may be the result of differential in expected inflation.
- The IFE theory suggests that foreign currencies with relatively high interest rates will depreciate because the high nominal interest rates reflect expected inflation. The nominal interest rate would also incorporate the default risk of an investment.
- The IFE equation can be given by:  $r_D - P_D = r_F - \Delta P_F$  OR  $P_D - P_F = \Delta S = r_D - r_F$
- The above equation states that if there are no barriers to capital flows the investment will flow in such manner that the real rate of return on investment will equalize. In fact, the equation represents the interaction between real sector, monetary sector and foreign exchange market.





- If the IFE holds, then a strategy of borrowing in one country and investing the funds in another country should not provide a positive return on average.
  - The reason is that exchange rates should adjust to offset interest rate differentials on the average.
- As we know that purchasing power has not held over certain periods, and since the International Fisher Effect is based on Purchasing Power Parity (PPP).
  - It does not consistently hold either, because there are factors other than inflation that affect exchange rates, the exchange rates do not adjust in accordance with the inflation differential.

### Question 3 :

"Operations in foreign exchange market are exposed to number of risks." Discuss.

Answer :

A firm dealing with foreign exchange may be exposed to foreign currency exposures. The exposure is the result of possession of assets and liabilities and transactions denominated in foreign currency. firm dealing with foreign exchange may be exposed to the following types of risks:

#### (i) Transaction Exposure :

- A firm may have some contractually fixed payments and receipts in foreign currency, such as, import payables, export receivables, interest payable on foreign currency loans etc. All such items are to be settled in a foreign currency.
- Unexpected fluctuation in exchange rate will have favourable or adverse impact on its cash flows. Such exposures are termed as transactions exposures.

#### (ii) Translation Exposure :

- The translation exposure is also called accounting exposure or balance sheet exposure. It is basically the exposure on the assets and liabilities shown in the balance sheet and which are not going to be liquidated in the near future.
- It refers to the probability of loss that the firm may have to face because of decrease in value of assets due to devaluation of a foreign currency despite the



fact that there was no foreign exchange transaction during the year.

(iii) Economic Exposure :

- Economic exposure measures the probability that fluctuations in foreign exchange rate will affect the value of the firm.
- The intrinsic value of a firm is calculated by discounting the expected future cash flows with appropriate discounting rate.
- The risk involved in economic exposure requires measurement of the effect of fluctuations in exchange rate on different future cash flows.

**Question 4 :**

Explain the significance of LIBOR in international financial transactions.

**Answer :**

LIBOR stands for London Inter Bank Offered Rate. Other features of LIBOR are as follows:

- 1) It is the base rate of exchange with respect to which most international financial transactions are priced.
- 2) It is used as the base rate for a large number of financial products such as options and swaps.
- 3) Banks also use the LIBOR as the base rate when setting the interest rate on loans, savings and mortgages.
- 4) It is monitored by a large number of professionals and private individuals world-wide.

**Question 5 :**

Write short notes on Leading and Lagging

**Answer :**

- Leading means advancing a payment i.e. making a payment before it is due. Lagging involves postponing a payment i.e. delaying payment beyond its due date.
- In forex market Leading and lagging are used for two purposes:
  - (i) Hedging foreign exchange risk:
    - ❖ A company can lead payments required to be made in a currency that is likely



to appreciate. Leading involves a finance cost

- ❖ A company may lag the payment that it needs to make in a currency that it is likely to depreciate, provided the receiving party agrees for this proposition. The receiving party may demand interest for this delay and that would be the cost of lagging. Decision regarding leading and lagging should be made after considering
  - Likely movement in exchange rate
  - Interest cost and
  - Discount (if any).
- (ii) Shifting the liquidity by modifying the credit terms between inter-group entities:
  - ❖ Example, A Holding Company sells goods to its 100% Subsidiary. Normal credit term is 90 days. Suppose cost of funds is 12% for Holding and 15% for Subsidiary.
    - In this case the Holding may grant credit for longer period to Subsidiary to get the best advantage for the group as a whole.
  - ❖ If cost of funds is 15% for Holding and 12% for Subsidiary, the Subsidiary may lead the payment for the best advantage of the group as a whole.
  - ❖ The decision regarding leading and lagging should be taken on the basis of cost of funds to both paying entity and receiving entity.
  - ❖ If paying and receiving entities have different home currencies, likely movements in exchange rate should also be considered.

**Question 6 :**

**What is the meaning and advantages of Netting?**

**Answer :**

- It is a technique of optimising cash flow movements with the combined efforts of the subsidiaries thereby reducing administrative and transaction costs resulting from currency conversion.





- There is a co-ordinated international interchange of materials, finished products and parts among the different units of MNC with many subsidiaries buying /selling from/to each other. Netting helps in minimising the total volume of inter-company fund flow.

Advantages derived from netting system includes:

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

There are two types of Netting:

#### 1) Bilateral Netting System :

- It involves transactions between the parent and a subsidiary or between two subsidiaries.
- If subsidiary X purchases \$ 20 million worth of goods from subsidiary Y and subsidiary Y in turn buy \$ 30 million worth of goods from subsidiary X, then the combined flows add up to \$ 50 million.
- But in bilateral netting system subsidiary Y would pay subsidiary X only \$10 million.
- Thus, bilateral netting reduces the number of foreign exchange transactions and also the costs associated with foreign exchange conversion.
- A more complex situation arises among the parent firm and several subsidiaries paving the way to multinational netting system.

#### 2) Multilateral Netting System :

- Each affiliate nets all its inter affiliate receipts against all its disbursements.
- It transfers or receives the balance on the position of it being a net receiver or a payer thereby resulting in savings in transfer / exchange costs.



- For an effective multilateral netting system these should be a *centralised communication system* along with disciplined subsidiaries.
- This type of system calls for the *consolidation of information and net cash flow positions* for each pair of subsidiaries.

### Question 7 :

*Briefly explain the main strategies for exposure management.*

**Answer :**

*Four separate strategy options are feasible for exposure management.*

*They are:*

- Low Risk: Low Reward*— This option involves *automatic hedging of exposures in the forward market* as soon as they arise, irrespective of the attractiveness or otherwise of the forward rate.
- Low Risk: Reasonable Reward*— This strategy requires *selective hedging of exposures* whenever forward rates are attractive but keeping exposures open whenever they are not.
- High Risk: Low Reward*— Perhaps the worst strategy is to leave all exposures *unhedged*.
- High Risk: High Reward*— This strategy involves *active trading in the currency market* through continuous cancellations and re-bookings of forward contracts. With exchange controls relaxed in India in recent times, a few of the larger companies are adopting this strategy.

### Question 8 :

*Discuss the types of Commodity Swaps.*

*(MTP Aug 18)*

**Answer :**

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

(a) *Fixed-Floating Swaps:*

- *They are just like the fixed-floating swaps in the interest rate swap market with the exception that both indices are commodity based indices.*





- General market indices in the international commodities market with which many people would be familiar include the S&P Goldman Sachs Commodities Index (S&PGSCI) and the Commodities Research Board Index (CRB). These two indices place different weights on the various commodities so they will be used according to the swap agent's requirements

#### (b) Commodity-for-Interest Swaps:

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

#### Question 9 :

What do you mean by Swap Contracts Explain Different Types of Swap Contracts.

Answer :

- Swaps are infinitely flexible.
- They are a method of exchanging the underlying economic basis of a debt or asset without affecting the underlying principal obligation on the debt or asset.
- A swap transaction commits the participants to exchange cash flows at specified intervals, called payment or settlement dates
- Main users of swaps are large multinational banks or corporations
- Swaps create credit exposures and are individually designed to meet the risk-management objectives of the participants

The vast majority of swaps are classified into the following groups:

#### 1. Interest Rate Swaps

- A swap is a contractual agreement between two parties to exchange, or "swap," future payment streams
  - Based on differences in the returns to different securities or changes in the price of some underlying item.
- Interest rate swaps constitute the most common type of swap agreement.
- 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.*
- *Financial intermediaries, such as banks, pension funds, and insurance companies, as well as non-financial firms use interest rate swaps to effectively change the maturity of outstanding debt or that of an interest-bearing asset.*
  - *Swaps grew out of parallel loan agreements in which firms exchanged loans denominated in different currencies.*

## 2. Currency Swaps

- *It involve an exchange of liabilities between currencies*
- *Currency swap can consist of three stages:*
  - *A spot exchange of principal – this forms part of the swap agreement as a similar effect can be obtained by using the spot foreign exchange market.*
  - *Continuing exchange of interest payments during the term of the swap – this represents a series of forward foreign exchange contracts during the term of the swap contract.*
  - *Re-exchange of principal on maturity*
- *A currency swap has the following benefits:*
  - *Treasurers can hedge currency risk*
  - *It can provide considerable cost savings*
  - *The swap market permits funds to be accessed in currencies*
  - *It offers diversification of borrowings*
- *Coupon swap/ Circus Swaps*
  - *More complex version of a currency swap*
  - *Swaps a fixed-or floating rate interest payment in one currency for a floating rate payment in another.*
- *In a currency swap the principal sum is usually exchanged*
  - *At the start;*
  - *At the end;*
  - *At a combination of both; or*





➤ Neither.

### 3. Commodity Swaps

- It is a kind of series of *Future Contracts* involving settlement
  - On the basis of *notional amount* over *multiple dates* at *predetermined specified reference prices* or *related commodities indices*
- This swap strategy can be used for any commodity but primarily used in hedging *oil price risks*

### 4. Equity Swaps

- Arrangement in which *total return* on equity or equity index in the form of
  - *Dividend and capital* is exchanged with either a *fixed or floating rate of interest*.





# International Financial Management

STUDY SESSION 10

International Financial Management

## Question 1 :

Write a note on Foreign Currency Convertible Bonds (FCCB's).

## Answer :

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

## Advantages of FCCBs

- The convertible bond gives the investor the flexibility to convert the bond into equity at a price or redeem the bond at the end of a specified period, normally three years if the price of the share has not met his expectations.
- Companies prefer bonds as it leads to delayed dilution of equity and allows company to avoid any current dilution in earnings per share that a further issuance of equity would cause.
- FCCBs are easily marketable as investors enjoys option of conversion into equity if resulting to capital appreciation. Further investor is assured of a minimum fixed interest earnings.







### Disadvantages of FCCBs

- Exchange risk is more in FCCBs as interest on bonds would be payable in foreign currency. Thus, companies with low debt equity ratios, large forex earnings potential only opt for FCCBs.
- FCCBs mean creation of more debt and a forex outgo in terms of interest which is in foreign exchange.
- In the case of convertible bonds, the interest rate is low, say around 3-4% but there is exchange risk on the interest payment as well as re-payment if the bonds are not converted into equity shares. The only major advantage would be that where the company has a high rate of growth in earnings and the conversion takes place subsequently, the price at which shares can be issued can be higher than the current market price.

### Question 2 :

Write short note on American Depository Receipts (ADRs).

### Answer :

- A depository receipt is basically a negotiable certificate denominated in US dollars that represent a non-US Company's publicly traded local currency (INR) equity shares/securities.
  - While the term refer to them is global depository receipts however, when such receipts are issued outside the US, but issued for trading in the US they are called ADRs
- An ADR is generally created by depositing the securities of an Indian company with a custodian bank. In arrangement with the custodian bank, a depository in the US issues the ADRs.
- The ADR subscriber/holder in the US is entitled to trade the ADR and generally enjoy rights as owner of the underlying Indian security.
- ADRs with special/unique features have been developed over a period of time and the practice of issuing ADRs by Indian Companies is catching up.
- Only such Indian companies that can stake a claim for international recognition can avail the opportunity to issue ADRs.



- The listing requirements in US and the US GAAP requirements are fairly severe and will have to be adhered. However, if such conditions are met ADR becomes an excellent source of capital bringing in foreign exchange.
- These are depository receipts issued by a company in USA and are governed by the provisions of Securities and Exchange Commission of USA. As the regulations are severe, Indian companies tap the American market through private debt placement of GDRs listed in London and Luxemburg stock exchanges.
- Apart from legal impediments, ADRs are costlier than Global Depository Receipts (GDRs). Legal fees are considerably high for US listing. Registration fee in USA is also substantial. Hence, ADRs are less popular than GDRs.

### Question 3 :

What is the impact of GDRs on Indian Capital Market?

Answer :

#### Impact of GDRs on Indian Capital Market

Since the inception of GDRs a remarkable change in Indian capital market has been observed as follows:

- (i) Indian stock market to some extent is shifting from Bombay to Luxemburg.
- (ii) There is arbitrage possibility in GDR issues.
- (iii) Indian stock market is no longer independent from the rest of the world. This puts additional strain on the investors as they now need to keep updated with worldwide economic events.
- (iv) Indian retail investors are completely side-lined. GDRs/Foreign Institutional Investors' placements + free pricing implies that retail investors can no longer expect to make easy money on heavily discounted rights/public issues. As a result of introduction of GDRs, a considerable foreign investment has flown into India.

#### Markets of GDRs

- (i) GDR's are sold primarily to institutional investors.
- (ii) Demand is likely to be dominated by emerging market funds.



- (iii) Switching by foreign institutional investors from ordinary shares into GDRs is likely.
- (iv) Major demand is also in UK, USA (Qualified Institutional Buyers), South East Asia (Hongkong, Singapore), and to some extent continental Europe (principally France and Switzerland).

Mechanism of GDR: The mechanics of a GDR issue may be described with the help of following diagram.

### Characteristics

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

### Questio 4 :

Write short note on Instruments of International Finance.

### Answer :

#### 1) Euro-Convertible Bonds (ECBs)

A convertible bond is a debt instrument which gives the holders of the bond an option to convert the bond into a predetermined number of equity shares of the company. The





bonds carry a fixed rate of interest. If the issuer company desires, the issue of such bonds may carry two options viz.

(i) Call Options (Issuer's option) :

- ❖ where the terms of issue of the bonds contain a provision for call option, the issuer company has the option of calling (buying) the bonds for redemption before the date of maturity of the bonds.
- ❖ Where the issuer's share price has appreciated substantially, i.e. far in excess of the redemption value of the bonds, the issuer company can exercise the option.
- ❖ This call option forces the investors to convert the bonds into equity.
- ❖ Usually, such a case arises when the share prices reach a stage near 130% to 150% of the conversion price.

(ii) Put options

- ❖ Provision of put option gives the holder of the bonds a right to put (sell) his bonds back to the issuer company at a pre-determined price and date.
- ❖ In case of Euro-Convertible bonds, the payment of interest on and the redemption of the bonds will be made by the issuer company in US dollars.

2) Other Sources

(i) Euro Bonds:

- ❖ Plain Euro-bonds are nothing but debt instruments. These are not very attractive for an investor who desires to have valuable additions to his investments.

(ii) Euro-Convertible Zero Bonds:

- ❖ These bonds are structured as a convertible bond. No interest is payable on the bonds.
- ❖ But conversion of bonds takes place on maturity at a pre-determined price.
- ❖ Usually there is a 5 year maturity period and they are treated as a deferred equity issue.

(iii) Euro-bonds with Equity Warrants:

- ❖ These bonds carry a coupon rate determined by the market rates. The warrants



are detachable.

- ❖ Pure bonds are traded at a discount. Fixed income funds' managements may like to invest for the purposes of regular income.

(iv) Syndicated bank loans:

- ❖ One of the earlier ways of raising funds in the form of large loans from banks with good credit rating, can be arranged in reasonably short time and with few formalities.
- ❖ The maturity of the loan can be for a duration of 5 to 10 years. The interest rate is generally set with reference to an index, say, LIBOR plus a spread which depends upon the credit rating of the borrower.
- ❖ Some covenants are laid down by the lending institution like maintenance of key financial ratios.

(v) Euro-bonds:

- ❖ These are basically debt instruments denominated in a currency issued outside the country of that currency.
- ❖ For examples Yen bond floated in France. Primary attraction of these bonds is the refuge from tax and regulations and provide scope for arbitraging yields.
- ❖ These are usually bearer bonds and can take the form of
  - Traditional fixed rate bonds.
  - Floating rate Notes.(FRNs)
  - Convertible Bonds.

(vi) Foreign Bonds:

- ❖ Foreign bonds are denominated in a currency which is foreign to the borrower and sold at the country of that currency.
- ❖ Such bonds are always subject to the restrictions and are placed by that country on the foreigner's funds.

(vii) Euro Commercial Papers:

- ❖ These are short term money market securities usually issued at a discount, for maturities less than one year.

(viii) Credit Instruments:

- ❖ The foregoing discussion relating to foreign exchange risk management and international capital market shows that foreign exchange operations of banks consist primarily of purchase and sale of credit instruments.
- ❖ There are many types of credit instruments used in effecting foreign remittances. They differ in the speed, with which money can be received by the creditor at the other end after it has been paid in by the debtor at his end.
- ❖ price or the rate of each instrument, therefore, varies with extent of the loss of interest and risk of loss involved. There are, therefore, different rates of exchange applicable to different types of credit instruments.

**Question 5 :**

Explain complexities involved in International Capital Budgeting.

(MTP May 20)

**Answer :**

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

- a) Cash flows from foreign projects must be converted into the currency of the parent organization.
- (b) Parent cash flows are quite different from project cash flows
- (c) Profits remitted to the parent firm are subject to tax in the home country as well as the host country
- (d) Effect of foreign exchange risk on the parent firm's cash flow
- (e) Changes in rates of inflation causing a shift in the competitive environment and thereby affecting cash flows over a specific time period
- (f) Restrictions imposed on cash flow distribution generated from foreign projects by the host country
- (g) Initial investment in the host country to benefit from the release of blocked funds





- (h) Political risk in the form of changed political events reduce the possibility of expected cash flows
- (i) Concessions/benefits provided by the host country ensures the upsurge in the profitability position of the foreign project
- (j) Estimation of the terminal value in multinational capital budgeting is difficult since the buyers in the parent company have divergent views on acquisition of the project.

### Question 6 :

Explain the problems that are faced in International Capital Budgeting Decision and how these can be overcome.

(MTP Oct 20)

### Answer :

The various types of problems faced in International Capital Budgeting analysis are as follows:

- (1) Multinational companies investing elsewhere are subjected to foreign exchange risk in the sense that currency appreciates/ depreciates over a span of time. To include foreign exchange risk in the cash flow estimates of any project, it is necessary to forecast the inflation rate in the host country during the lifetime of the project. Adjustments for inflation are made in the cash flows depicted in local currency. The cash flows are converted in parent country's currency at the spot exchange rate multiplied by the expected depreciation rate obtained from purchasing power parity.
- (2) Due to restrictions imposed on transfer of profits, depreciation charges and technical differences exist between project cash flows and cash flows obtained by the parent organization. Such restriction can be diluted by the application of techniques viz internal transfer prices, overhead payments. Adjustment for blocked funds depends on its opportunity cost, a vital issue in capital budgeting process.
- (3) In multinational capital budgeting, after tax cash flows need to be considered for project evaluation. The presence of two tax regimes along with other factors such as remittances to the parent firm in the form of royalties, dividends, management fees etc., tax provisions with held in the host country, presence of tax treaties, tax discrimination pursued by the



host country between transfer of realized profits vis-à-vis local re-investment of such profits cause serious impediments to multinational capital budgeting process. MNCs are able to reduce overall tax burden through the system of transfer pricing.

For computation of actual after-tax cash flows accruing to the parent firm, higher of home/host country tax rate is used. If the project becomes feasible then it is acceptable under a more favourable tax regime. If not feasible, then, other tax saving aspects need to be incorporated to find out whether the project crosses the hurdle rate.





NOTES

International Financial Management





# Interest Rate Risk Management

STUDY SESSION 11

## Question 1 :

What is Interest Rate Risk and what are the types of Interest Rate Risk?

Answer :

### 1) How interest rates are determined

The factors affecting interest rates are largely macro-economic in nature

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

### 2) Interest Rate Risk

- Interest risk is the change in prices of bonds that could occur because of change in interest rates. It also considers change in impact on interest income due to changes in the rate of interest.
- In other words, price as well as reinvestment risks require focus. Insofar as the terms for which interest rates were fixed on deposits differed from those for which they fixed on assets, banks incurred interest rate risk i.e., they stood to make gains or losses with every change in the level of interest rates.

### 3) Types of Interest Rate Risk

Various types of Interest rate risk faced by companies/ banks are as follows:

#### i) Gap Exposure

- ❖ A gap or mismatch risk arises from holding assets and liabilities and off-balance sheet items with different principal amounts, maturity dates or re-pricing dates



- ❖ The positive Gap indicates that banks have more interest Rate Sensitive Assets (RSAs) than interest Rate Sensitive Liabilities (RSLs). negative gap indicates that banks have more RSLs than RSAs. The Gap is used as a measure of interest rate sensitivity.
    - A positive or asset sensitive Gap means that an increase in market interest rates could cause an increase in Net Interest Income (NII).
    - Conversely, a negative or liability sensitive Gap implies that the banks' NII could decline as a result of increase in market interest rates.
  - ❖ Positive or Negative Gap is multiplied by the assumed interest rate changes to derive the Earnings at Risk (EaR). The EaR method facilitates to estimate how much the earnings might be impacted by an adverse movement in interest rates.
  - ❖ The periodic gap analysis indicates the interest rate risk exposure of banks over distinct maturities and suggests magnitude of portfolio changes necessary to alter the risk profile
- ii) **Basis Risk**
- ❖ Market interest rates of various instruments seldom change by the same degree during a given period of time. The risk that the interest rate of different assets, liabilities and off-Balance sheet items may change in different magnitude is termed as basis risk.
  - ❖ For example while assets may be benchmarked to Fixed Rate of Interest, liabilities may be benchmarked to floating rate of interest.
  - ❖ The degree of basis risk is fairly high in respect of banks that create composite assets out of composite liabilities.
  - ❖ The Loan book in India is funded out of a composite liability portfolio and is exposed to a considerable degree of basis risk. The basis risk is quite visible in volatile interest rate scenarios
  - ❖ When the variation in market interest rate causes the NII to expand, the banks have experienced favourable basis shifts and if the interest rate movement causes the NII to contract, the basis has moved against the banks.

### iii) Embedded Option Risk

- ❖ Significant changes in market interest rates create another source of risk to banks' profitability by encouraging prepayment of cash credit/demand loans/term loans and exercise of call/put options on bonds/debentures and/or premature withdrawal of term deposits before their stated maturities.
- ❖ The embedded option risk is becoming a reality in India and is experienced in volatile situations. The faster and higher the magnitude of changes in interest rate, the greater will be the embedded option risk to the banks' NII
- ❖ Thus, banks should evolve scientific techniques to estimate the probable embedded options and adjust the Gap statements (Liquidity and Interest Rate Sensitivity) to realistically estimate the risk profiles in their balance sheet.
- ❖ Banks should also endeavour to stipulate appropriate penalties based on opportunity costs to stem the exercise of options, which is always to the disadvantage of banks

### iv) Yield Curve Risk

- ❖ In a floating interest rate scenario, banks may price their assets and liabilities based on different benchmarks, i.e. TBs yields, fixed deposit rates, call money rates, MIBOR, etc.
- ❖ In case the banks use two different instruments maturing at different time horizon for pricing their assets and liabilities, any non-parallel movements in yield curves would affect the NII.
- ❖ The movements in yield curve are rather frequent when the economy moves through business cycles. Thus, banks should evaluate the movement in yield curves and the impact of that on the portfolio values and income.

### v) Price Risk

- ❖ Price risk occurs when assets are sold before their stated maturities. In the financial market, bond prices and yields are inversely related.
- ❖ The price risk is closely associated with the trading book, which is created for making profit out of short-term movements in interest rates.





❖ 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.

vi) Reinvestment Risk

❖ Uncertainty with regard to interest rate at which the future cash flows could be reinvested is called reinvestment risk.

❖ Any mismatches in cash flows would expose the banks to variations in NII as the market interest rates move in different directions.

vii) Net Interest Position Risk

❖ The size of non-paying liabilities is one of the significant factors contributing towards profitability of banks.

❖ Where banks have more earning assets than paying liabilities, interest rate risk arises when the market interest rates adjust downwards.

❖ 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.

**Question 2 :**

Explain the meaning of the following relating to Swap transactions:

(i) Plain Vanilla Swaps

(ii) Basis Rate Swaps

(iii) Asset Swaps

(iv) Amortising Swaps

**Answer :**

(a) Plain Vanilla Swap:

➤ Also called Generic Swap and it involves the exchange of a fixed rate loan to a floating rate loan. Floating rate basis can be LIBOR, MIBOR, Prime Lending Rate etc.

- For example, Fixed interest payments on a generic swap are calculated assuming each month has 30 days, and the quoted interest rate is based on a 360-day year. Given an All-In-Cost of the swap, the semi-annual fixed-rate payment would be:

$$(N)(AIC)(180/360),$$

Where,

$N$  denotes the notional principal amount of the agreement.

$AIC$  denotes the fixed rate

Then, the floating-rate receipt is determined by the formula:

$$(N)(R)(dt/360)$$

Where,

$dt$  denote the number of days since the last settlement date  $R$  denotes the reference rate such as LIBOR, MIBOR etc.

#### (b) Basis Rate Swap :

- Also, called Non-Generic Swap. Similar to plain vanilla swap with the difference payments based on the difference between two different variable rates.
- For example one rate may be 1 month LIBOR and other may be 3-month LIBOR. In other words two legs of swap are floating but measured against different benchmarks

#### (c) Asset Swap :

- Like plain vanilla swaps with the difference that it is the exchange fixed rate investments
- Such as bonds which pay a guaranteed coupon rate with floating rate investments such as an index.

#### (d) Amortising Swap :

- An interest rate swap in which the notional principal for the interest payments declines during the life of the swap.
- They are particularly useful for borrowers who have issued redeemable bonds or debentures.



- It enables them to *interest rate hedging* with redemption profile of bonds or debentures

### Question 3 :

What do you know about swaptions and their uses?

Answer :

- An interest rate swaption is simply an *option on an interest rate swap*. It gives the holder the right but not the obligation to enter into an interest rate swap at a specific date in the future, at a particular fixed rate and for a specified term.
- There are two types of swaption contracts: -
  - A *fixed rate payer swaption* gives the owner of the swaption the right but not the obligation to enter into a swap where they pay the fixed leg and receive the floating leg.
  - A *fixed rate receiver swaption* gives the owner of the swaption the right but not the obligation to enter into a swap in which they will receive the fixed leg, and pay the floating leg.

#### 1) Principal Features of Swaptions

- a) A swaption is effectively an option on a *forward-start IRS*, where exact terms such as the fixed rate of interest, the floating reference interest rate and the tenor of the IRS are established upon conclusion of the swaption contract.
- b) A *3-month into 5-year swaption* would therefore be seen as an option to enter into a 5-year IRS, 3 months from now.
- c) The 'option period' refers to the time which elapses between the transaction date and the expiry date.
- d) The swaption premium is expressed as *basis points*.
- e) Swaptions can be *cash-settled*; therefore at expiry they are marked to market off the applicable forward curve at that time and the difference is settled in cash.





## 2) Pricing of Swaptions

The pricing methodology depends upon setting up a model of probability distribution of the forward zero-coupon curve which undoes a Market process.

## 3) Uses of Swaptions

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

### Question 4 :

Give the meaning of 'Caps, Floors and Collars' options.

Answer :

Cap :

- It is a series of call options on interest rate covering a medium-to-long term floating rate liability.
- Purchase of a Cap enables the a borrowers to fix in advance a maximum borrowing rate for a specified amount and for a specified duration, while allowing him to avail benefit of a fall in rates.
- The buyer of Cap pays a premium to the seller of Cap.

Floor :

- It is a put option on interest rate.
- Purchase of a Floor enables a lender to fix in advance, a minimal rate for placing a specified amount for a specified duration, while allowing him to avail benefit of a rise in rates.



- The buyer of the floor pays the premium to the seller

#### Collars :

- It is a combination of a Cap and Floor.
- The purchaser of a Collar buys a Cap and simultaneously sells a Floor.
- A Collar has the effect of locking its purchases into a floating rate of interest that is bounded on both high side and the low side.

#### Question 5 :

Write a short note on Forward Rate Agreements.

#### Answer :

- 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.

- Normally it is used by banks to fix interest costs on anticipated future deposits or interest revenues on variable-rate loans indexed to LIBOR.
- It is an off Balance Sheet instrument
- It does not involve any transfer of principal.
- It is settled at maturity in cash representing the profit or loss.
- Final settlement of the amounts owed by the parties to an FRA is determined by the formula

Where,

$N$  = the notional principal amount of the agreement;

$RR$  = Reference Rate for the maturity specified by the contract prevailing on the contract settlement date; typically LIBOR or MIBOR

$FR$  = Agreed-upon Forward Rate; and

$D_{tm}$  = maturity of the forward rate, specified in days (FRA Days)

$DY$  = Day count basis applicable to money market transactions which could be 360 or 365 days.



If  $LIBOR > FR$  the seller owes the payment to the buyer, and if  $LIBOR < FR$  the buyer owes the seller the absolute value of the payment amount determined by the above formula.

- The differential amount is discounted at post change (actual) interest rate as it is settled in the beginning of the period not at the end.
- Thus, buying an FRA is comparable to selling, or going short, a Eurodollar or LIBOR futures contract.

**Question 6 :**

Write a short note on Interest Rate Swap.

**Answer :**

- A swap is a contractual agreement between two parties to exchange, or "swap," future payment streams
  - Based on differences in the returns to different securities or changes in the price of some underlying item.
- Interest rate swaps constitute the most common type of swap agreement.
- 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.
- Financial intermediaries, such as banks, pension funds, and insurance companies, as well as non-financial firms use interest rate swaps to effectively change the maturity of outstanding debt or that of an interest-bearing asset.
  - Swaps grew out of parallel loan agreements in which firms exchanged loans denominated in different currencies.

**Question 7 :**

What do you mean by the term 'Cheapest to Deliver' in context of Interest Rate Futures?

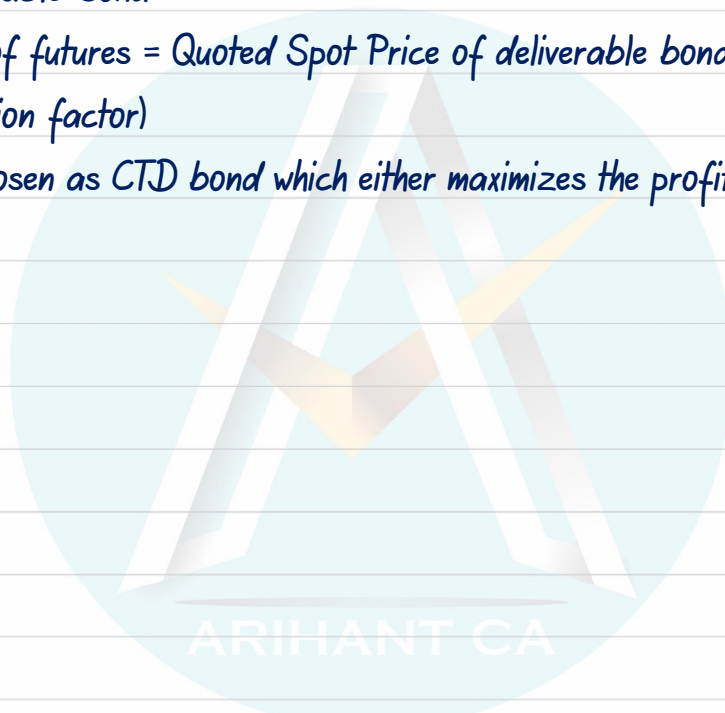
(MTP May 20)





*Answer :*

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





# Corporate Valuation

STUDY SESSION 12

## Question 1 :

Relative Valuation is the method to arrive at a 'relative' value using a 'comparative' analysis to its peers or similar enterprises. Elaborate this statement.

## Answer :

- The three approaches that we saw to arriving at the value of an enterprise viz. the asset based, the earnings based and the cash flow based are for arriving at the 'intrinsic value' of the same.
- Relative Valuation is the method to arrive at a 'relative' value using a 'comparative' analysis to its peers or similar enterprises.
- The Relative valuation, also referred to as 'Valuation by multiples,' uses financial ratios to derive at the desired metric (referred to as the 'multiple') and then compares the same to that of comparable firms.
- In the process, there may be extrapolations set to the desired range to achieve the target set. To elaborate -
  - 1) Find out the 'drivers' that will be the best representative for deriving at the multiple
  - 2) Determine the results based on the chosen driver(s) thru financial ratios
  - 3) Find out the comparable firms, and perform the comparative analysis, and,
  - 4) Iterate the value of the firm obtained to smoothen out the deviations

## Step 1 :

- Finding the correct driver that goes to determine the multiple is significant for relative valuation as it sets the direction to the valuation approach.
- Thereby, one can have two sets of multiple based approaches depending on the tilt of the drivers -
  - a) Enterprise value based multiples, which would consist primarily of EV/EBITDA, EV/Invested Capital, and EV/Sales.
  - b) Equity value based multiples, which would comprise of P/E ratio and PEG.





- In light of relative valuation, we can definitely add that whereas EV/EBITDA is a popular ratio and does provide critical inputs
- The EV/Invested Capital will be more appropriate to capital intensive enterprises, and EV/Sales will be used by companies who are cash rich, have a huge order book, and forecast organic growth thru own capital.
- The P/E has a celebrated status amongst Equity based multiples, and the PEG is more suitable where we are doing relative valuation of either high growth or sunrise industries

### Step 2 :

- Choosing the right financial ratio is a vital part of success of this model. A factor based approach may help in getting this correct
- For example - a firm that generates revenue mostly by exports will be highly influenced by future foreign exchange fluctuations.
- A pure P/E based ratio may not be reflective of this reality, which couldn't pre-empt the impacts that Brexit triggered on currency values. Likewise, an EV/Invested Capital would be a misfit for a company which may be light on core assets, or if has significant investment properties.

### Step 3 :

- Arriving at the right mix of comparable firms: This is perhaps the most challenging of all the steps - No two entities can be same - even if they may seem to be operating within the same risk and opportunity perimeter.
- So, a software company 'X' that we are now comparing to a similar sized company 'Y' may have a similar capital structure, a similar operative environment, and head count size - so far the two firms are on even platform for returns forecast and beta values.
  - On careful scrutiny, it is now realized that the revenue generators are different - X may be deriving its revenues from dedicated service contracts having FTE pricing, whereas Y earns thru UTP pricing model.
- This additional set of information dramatically changes the risk structure - and this is precisely what the discerning investor has to watch for. In other words, take benchmarks with a pinch of salt.





### Step 4 :

- Iterate / extrapolate the results obtained to arrive at the correct estimate of the value of the firm.

### Question 2 :

Write a note on Shareholder Value Analysis (SVA).

#### Answer :

- SVA looks to plug in this gap by tweaking the value analysis to take into its forage certain 'drivers' that can expand the horizon of value creation. The key drivers considered are of 'earnings potential in terms of sales, investment opportunities, and cost of incremental capital.
- The following are the steps involved in SVA computation:
  - a) Arrive at the Future Cash Flows (FCFs) by using a judicious mix of the 'value drivers'
  - b) Discount these FCFs using the WACC
  - c) Add the terminal value to the present values computed in step (b)
  - d) Add the market value of non-core assets
  - e) Reduce the value of debt from the result in step (d) to arrive at value of equity

### Question 3 :

Explain Chop Shop method of valuation.

#### Answer :

- This approach attempts to identify multi-industry companies that are undervalued and would have more value if separated from each other
- This approach involves following three steps:
  - Step 1: Identify the firm's various business segments and calculate the average capitalization ratios for firms in those industries
  - Step 2: Calculate a "theoretical" market value based upon each of the average capitalization ratios.



- *Step 3: Average the "theoretical" market values to determine the "chop-shop" value of the firm.*

*Question 4 :*

*Differentiate between EVA and MVA.*

*Answer :*

EVA

- *EVA is a performance measure for management of the company*
  - *EVA = NOPAT - (Invested Capital \* WACC) OR*
  - *NOPAT - Capital Charge*
- *(EVA) is a holistic method of evaluating a company's financial performance,*
- *Core concept behind EVA is that a company generates 'value' only if there is a creation of wealth in terms of returns in excess of its cost of capital invested.*
- *EVA insists on separation of firm's operation from its financing.*
- *EVA looks at performance of the 'management' of a company*

MVA

- *MVA simply means the Current Market Value of the firm minus the Invested Capital*
- *MVA is an attempt to resolve some of the issues involved in EVA e.g. ignoring Value Drivers, Book Value etc.*
- *MVA itself does not give any basis of share valuation but an alternative way to gauge performance efficiencies of an enterprise*
- *MVA represents market views regarding company's future value generation*
- *EVA may also sometimes have a slightly negative correlation as compared to MVA.*



# Merger, Acquisition & Corporate Restructuring

STUDY SESSION 13

Question 1 :

Explain some of the rationale for Mergers & Acquisitions ?

OR

Explain synergy in the context of Merger & Acquisitions.

Answer :

The most common reasons for Mergers and Acquisition (M&A) are:

Synergistic operating economics: Synergy May be defined as follows:

- $V(AB) > V(A) + V(B)$ .
- combined value of two firms or companies shall be more than their individual
  - Synergy is the increase in performance of the combined firm over what the two firms are already expected or required to accomplish as independent firms
- A good example of complimentary activities can a company may have a good networking of branches and other company may have efficient production system.
  - Thus the merged companies will be more efficient than individual companies.
- On similar lines, economics of large scale is also one of the reasons for synergy benefits.
  - The main reason is that, the large scale production results in lower average cost of production
- These economics can be "real" arising out of reduction in factor input per unit of output, whereas pecuniary economics are realized from paying lower prices for factor inputs for bulk transactions

Diversification:

- In case of merger between two unrelated companies would lead to reduction in business risk, which in turn will increase the market value consequent upon the reduction in discount rate/ required rate of return.
- Normally, greater the combination of statistically independent or negatively correlated income streams of merged companies, there will be higher reduction in the business risk







in comparison to companies having income streams which are positively correlated to each other.

#### Taxation:

- The provisions of set off and carry forward of losses as per Income Tax Act may be another strong reason for the merger and acquisition.
- There will be Tax saving or reduction in tax liability of the merged firm.
- Similarly, in the case of acquisition the losses of the target company will be allowed to be set off against the profits of the acquiring company

#### Growth:

- Merger and acquisition mode enables the firm to grow at a rate faster than the other mode viz., organic growth. The reason being the shortening of 'Time to Market'.
- The acquiring company avoids delays associated with purchasing of building, site, setting up of the plant and hiring personnel etc.

#### Consolidation of Production Capacities and increasing market power:

- Due to reduced competition, marketing power increases. Further, production capacity is increased by combined of two or more plants.
- Objectives for which amalgamation may be resorted to are
  - Horizontal growth to achieve optimum size, to enlarge the market share, to curb competition or to use unutilised capacity;
  - Vertical combination with a view to economising costs and eliminating avoidable sales-tax and/or excise duty;
  - Diversification of business;
  - Mobilising financial resources by utilising the idle funds lying with another company for the expansion of business.
  - Merger of an export, investment or trading company with an industrial company or vice versa with a view to increasing cash flow
  - Merging subsidiary company with the holding company with a view to improving cash flow





- Taking over a 'shell' company which may have the necessary industrial licences etc., but whose promoters do not wish to proceed with the project

### Question 2 :

What are the forms (Types) of Mergers?

Answer :

#### (i) Horizontal Merger:

- The two companies which have merged are in the same industry
- normally the market share of the new consolidated company would be larger
- It is possible that it may move closer to being a monopoly or a near monopoly to avoid competition

#### (ii) Vertical Merger:

- This merger happens when two companies that have 'buyer-seller' relationship (or potential buyer-seller relationship) come together.

#### (iii) Conglomerate Mergers:

- Such mergers involve firms engaged in unrelated type of business operations.
  - ❖ The business activities of acquirer and the target are neither related to each other horizontally nor vertically
- In a pure conglomerate merger, there are no important common factors between the companies in production, marketing, research and development and technology.
- Such mergers are in fact, unification of different kinds of businesses under one flagship company.
- The purpose of merger remains utilization of financial resources, enlarged debt capacity and also synergy of managerial functions.

#### (iv) Congeneric Merger:

- The acquirer and the target companies are related through basic technologies, production processes or markets.
- The acquired company represents an extension of product-line, market participants or technologies of the acquirer.





➤ These mergers represent an outward movement by the acquirer from its current business scenario to other related business activities within the overarching industry structure.

(v) Reverse Merger:

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

(vi) Acquisition:

- This refers to the purchase of controlling interest by one company in the share capital of an existing company. This may be by:
  - ❖ An agreement with majority holder of Interest
  - ❖ Purchase of new shares by private agreement
  - ❖ Purchase of shares in open market (open offer)
  - ❖ Acquisition of share capital of a company by means of cash, issuance of shares.
  - ❖ Making a buyout offer to general body of shareholders

**Question 3 :**

**What are Takeover & Defensive Tactics?**

**Answer :**

- Normally acquisitions are made friendly, however when the process of acquisition is unfriendly
- Hostile takeover arises when the Board of Directors of the acquiring company decide to approach the shareholders of the target company directly through a Public Announcement (Tender Offer) to buy their shares consequent to the rejection of the offer made to the Board of Directors of the target company

Take Over Strategies

Other than Tender Offer the acquiring company can also use the following techniques:

- Street Sweep: This refers to the technique where the acquiring company accumulates larger number of shares in a target before making an open offer. The advantage is that the







target company is left with no choice but to agree to the proposal of acquirer for takeover.

- **Bear Hug:** When the acquirer threatens the target company to make an open offer, the board of target company agrees to a settlement with the acquirer for change of control.
- **Strategic Alliance:** This involves disarming the acquirer by offering a partnership rather than a buyout. The acquirer should assert control from within and takeover the target company.
- **Brand Power:** This refers to entering into an alliance with powerful brands to displace the target's brands and as a result, buyout the weakened company.

### Defensive Tactics

A target company can adopt a number of tactics to defend itself from hostile takeover through a tender offer.

- **Divestiture :** In a divestiture the target company divests or spins off some of its businesses in the form of an independent, subsidiary company. Thus, reducing the attractiveness of the existing business to the acquirer.
- **Crown jewels :** When a target company uses the tactic of divestiture it is said to sell the crown jewels. In some countries such as the UK, such tactic is not allowed once the deal becomes known and is unavoidable.
- **Poison pill :** Sometimes an acquiring company itself becomes a target when it is bidding for another company. The tactics used by the acquiring company to make itself unattractive to a potential bidder is called poison pills.
- **Poison Put :** In this case the target company issue bonds that encourage holder to cash in at higher prices. The resultant cash drainage would make the target unattractive
- **Greenmail :** Greenmail refers to an incentive offered by management of the target company to the potential bidder for not pursuing the takeover. The management of the target company may offer the acquirer for its shares a price higher than the market price
- **White knight :** In this a target company offers to be acquired by a friendly company to escape from a hostile takeover. The possible motive for the management of the target





company to do so is not to lose the management of the company. The hostile acquirer may change the management.

- **White squire** : This strategy is essentially the same as white knight and involves sell out of shares to a company that is not interested in the takeover. As a consequence, the management of the target company retains its control over the company.
- **Golden parachutes** : When a company offers hefty compensations to its managers if they get ousted due to takeover, the company is said to offer golden parachutes. This reduces their resistance to takeover.
- **Pac-man defence** : This strategy aims at the target company making a counter bid for the acquirer company. This would force the acquirer to defend itself and consequently may call off its proposal for takeover.

**Question 4 :**

**What is Takeover by Reverse Bid or Reverse Merger ?**

**Answer :**

- Generally, a big company takes over a small company. When the smaller company gains control of a larger one then it is called "Take-over by reverse bid".
- In case of reverse take-over, a small company takes over a big company. This concept has been successfully followed for revival of sick industries
- The acquired company is said to be big if any one of the following conditions is satisfied:
  - a) The assets of the transferor company are greater than the transferee company
  - b) Equity capital to be issued by the transferee company pursuant to the acquisition exceeds its original issued capital
  - c) The change of control in the transferee company will be through the introduction of minority holder or group of holders
- Reverse takeover takes place in the following cases:
  - a) When the acquired company (big company) is a financially weak company
  - b) When the acquirer (the small company) already holds a significant proportion of shares of the acquired company (small company)



- c) When the people holding top management positions in the acquirer company want to be relieved off of their responsibilities.
- The concept of take-over by reverse bid, or of reverse merger, is thus not the usual case of amalgamation of a sick unit which is non-viable with a healthy or prosperous unit
  - but is a case whereby the entire undertaking of the healthy and prosperous company is to be merged and vested in the sick company which is non-viable.

### Question 5 :

What are the different forms of divestitures or demerger?

Answer :

#### 1) Sell off / Partial Sell off

- A sell off is the sale of an asset, factory, division, product line or subsidiary by one entity to another for a purchase consideration payable either in cash or in the form of securities.
- Partial Sell off, is a form of divestiture, wherein the firm sells its business unit or a subsidiary to another because it deemed to be unfit with the company's core business strategy.
- Normally, sell-offs are done because the subsidiary doesn't fit into the parent company's core strategy.
- The market may be undervaluing the combined businesses due to a lack of synergy between the parent and the subsidiary.
- So the management and the board decide that the subsidiary is better off under a different ownership. Besides getting rid of an unwanted subsidiary, sell-offs also raise cash, which can be used to pay off debts.
- The raiders' method certainly makes sense if the sum of the parts is greater than the whole. When it isn't, deals are unsuccessful

#### 2) Spin-off

- Part of the business is separated and created as a separate firm. The existing shareholders of the firm get proportionate ownership.





- So there is *no change in ownership* and the same shareholders continue to own the newly created entity in the same proportion as previously in the original firm.
- The management of spun-off division is however, parted with Spin-off does not bring fresh cash. The reasons for spin off may be
  - i. *Separate identity* to a part/division
  - ii. To *avoid the takeover attempt* by a predator by making the firm unattractive to him since a valuable division is spun-off
  - iii. To *create separate Regulated and unregulated* lines of business
- **Example:** Kishore Biyani led Future Group spin off its consumer durables business, Ezone, into a separate entity in order to maximise value from it.

### 3) Split-up

- This involves *breaking up of the entire firm into a series of spin off*. The parent firm no longer legally exists and only the newly created entities survive.
- The original corporate firm is to be wound up. Since *de-merged units are relatively smaller in size, they are logistically more convenient and manageable*
- Therefore, it is understood that *spin-off and split-up are likely to enhance shareholders value and bring efficiency and effectiveness*

### 4) Equity Carve outs

- This is like spin off, however, *some shares of the new company are sold in the market by making a public offer, so this brings cash.*
- *More and more companies are using equity carve-outs to boost shareholder value.*
- *Parent firm makes a subsidiary public through an initial public offering (IPO) of shares, amounting to a partial sell-off.*
- *A carve-out is a strategic avenue a parent firm may take when one of its subsidiaries is growing faster and carrying higher valuations than other businesses owned by the parent.*
- *The new legal entity of a carve-out has a separate board, but in most carve-outs, the parent retains some control over it.*





❖ In these cases, some portion of the parent firm's board of directors may be shared. Since the parent has a controlling stake, meaning that both firms have common shareholders, the connection between the two is likely to be strong.

➤ That said, sometimes companies carve-out a subsidiary not because it is doing well, but because it is a burden.

### 5) Sale of a Division

➤ In the case of sale of a division, the seller company is demerging its business whereas the buyer company is acquiring a business.

➤ For the first time the tax laws in India propose to recognize demergers.

### Question 6 :

Write a note on Financial Restructuring ?

Answer :

- Financial restructuring refers to a kind of internal changes made by the management in Assets and Liabilities of a company with the consent of its various stakeholders.
- In fact, in some cases, the accumulated losses are even more than the share capital and thus leading to negative net worth, putting the firm on the verge of liquidation.
  - In order to revive such firms, financial restructuring is one of the technique to bring into health such firms which are having potential and promise for better financial performance in the years to come.
- To achieve this desired objective, such firms need to re-start with a fresh balance sheet free from losses and fictitious assets and show share capital at its true worth.
- To nurse back such firms a plan of restructuring need to be formulated involving a number of legal formalities
- An attempt is made to do refinancing and rescue financing while Restructuring. Normally equity shareholders make maximum sacrifice by foregoing certain accrued benefits, followed by preference shareholders and debenture holders, lenders and creditors etc.
- The sacrifice may be in the form of waving a part of the sum payable to various liability holders. The foregone benefits may be in the form of new securities with lower coupon





rates so as to reduce future liabilities. The sacrifice may also lead to the conversion of debt into equity.

- In nutshell it may be said that financial restructuring (also known as internal reconstruction) is aimed at reducing the debt/payment burden of the corporate firm. This results into
  - (i) Reduction/Waiver in the claims from various stakeholders;
  - (ii) Real worth of various properties/assets by revaluing them timely;
  - (iii) Utilizing profit accruing on account of appreciation of assets to write off accumulated losses and fictitious assets

**Question 7 :**

Write a note on LBO?

(RTP May 2020)

**Answer :**

- A Leveraged buy-out (LBO) is an acquisition of a company in which the acquisition is substantially financed through debt.
  - Typically in the LBO 90% or more of the purchase price is financed with debt.
- While some leveraged buyouts involve a company in its entirety most involve a business unit of a company. After the buyout, the company invariably becomes a Private Company.
- A large part of the borrowings is secured by the firm's assets, and the lenders, because of a high risk, take a portion of the firm's equity.
- Junk bonds have been routinely used to raise amounts of debt needed to finance LBO transaction.
- The success of the entire operation it depends on their ability to improve the performance of the unit, curtail its business risk, exercise cost controls and liquidate disposable asset.
  - If they fail to do so, the high fixed financial costs can jeopardize the venture.
- An attractive candidate for acquisition through leveraged buyout should possess three basic attributes







- a) If firm have a good position in its industry with a solid profit history and reasonable expectations of growth.
  - b) The firm should have a relatively low level of debt and a high level of bankable assets that can be used as loan collateral.
  - c) It must have a stable and predictable cash flows that are adequate to meet interest and principle payment of the debt and provide adequate working capital.
- Typical advantages of the leveraged buy-out method include:
    - a) Low capital or cash requirement for the acquiring entity
    - b) Synergy gains, by expanding operations outside own industry or business
    - c) Efficiency gains by eliminating the value-destroying effects of excessive diversification
    - d) Improved Leadership and Management : Sometimes managers run companies in ways that improve their authority (control and compensation) at the expense of the companies' owners, shareholders, and long-term strength.
    - e) Leveraging : as the debt ratio increases, the equity portion of the acquisition financing shrinks to a level at which a private equity firm can acquire a company by putting up anywhere from 20-40% of the total purchase price.
    - f) Acquiring Company pay less taxes because interest payments on debt are tax-deductible
  - Critics of Leveraged buy-outs:
    - a) The major risk of the leveraged buyout is bankruptcy of the acquired company
    - b) The risk associated with a leveraged buyout is that of financial distress, and unforeseen events
    - c) Leveraged buyouts can harm the long-term competitiveness of firms involved
    - d) Attempting an LBO can be particularly dangerous for companies that are vulnerable to industry competition or volatility in the overall economy.
    - e) If the company does fail following an LBO, this can cause significant problems for employees and suppliers, as lenders are usually in a better position to collect their money.





- f) Another disadvantage is that paying high interest rates on LBO debt can damage a company's credit rating.
- g) Finally, it is possible that management may propose an LBO only for short-term personal profit.

#### Management Buy Outs

- Buyouts initiated by the management team of a company are known as a management buyout. In this type of acquisition, the company is bought by its own management team.
- MBOs are considered as a useful strategy for exiting those divisions that does not form part of the core business of the entity.

#### Question 8 :

Write a note on Equity Buy-back?

Answer :

- This refers to the situation wherein a company buys back its own shares back from the market. This results in reduction in the equity capital of the company. This strengthen the promoter's position by increasing his stake in the equity of the company.
- The buyback is a process in which a company uses its surplus cash to buy shares from the public. It is almost the opposite of initial public offer in which shares are issued to the public for the first time.
- In buyback, shares which have already been issued are bought back from the public. And, once the shares are bought back, they get absorbed and cease to exist.
- Effects of Buyback
  - i. It increases the proportion of shares owned by controlling shareholders as the number of outstanding shares decreases after the buyback.
  - ii. Earning Per Share (EPS) escalates as the number of shares reduces leading the market price of shares to step up.
  - iii. A share repurchase also effects a company's financial statements as follows:



- a) In balance sheet, a share buyback will reduce the company's total assets position as cash holdings will be reduced and consequently as shareholders' equity reduced it results in reduction on the liabilities side by the same amount.
- b) Amount spent on share buybacks shall be shown in Statement of Cash Flows in the "Financing Activities" section, as well as from the Statement of Changes in Equity or Statement of Retained Earnings.
- iv. Ratios based on performance indicators such as Return on Assets (ROA) and Return on Equity (ROE) typically improve after a share buyback.

### Question 9 :

Write a note on Cross-Border M&A ?

Answer :

- Cross-border M&A is a popular route for global growth and overseas expansion. Cross-border M&A is also playing an important role in global M&A.
- The Quarterly : Last year was the first in which Asian and Indian companies acquired more businesses outside of Asia than European or US multinationals acquired within it.
- What's behind the Tata Group's move to go global?
- His response is as follows:-
  - India is clearly a very large country with a significant population and a big market, and the Tata Group's companies in a number of sectors have a pretty significant market share.
  - India remains the main base for future growth for Tata Steel Group, and we have substantial investment plans in India, which are currently being pursued.
  - But meeting our growth goals through organic means in India, unfortunately, is not the fastest approach, especially for large capital projects, due to significant delays on various fronts.
  - Nor are there many opportunities for growth through acquisitions in India, particularly in sectors like steel, where the value to be captured is limited—for example, in terms of technology, product profiles, the product mix, and good management.







- Other major factors that motivate multinational companies to engage in cross-border M&A in Asia include the following:
  - Globalization of production and distribution of products and services.
  - Integration of global economies
  - Expansion of trade and investment relationships on International level.
  - Many countries are reforming their economic and legal systems, and providing generous investment and tax incentives to attract foreign investment.
  - Privatisation of state-owned enterprises and consolidation of the banking industry.

### Question 10 :

What is an equity curve out? How does it differ from a spin off?

Answer :

- Equity Curve out can be defined as partial spin off in which a company creates its own new subsidiary and subsequently bring out its IPO.
- It should be however noted that parent company retains its control and only a part of new shares are issued to public.
- On the other hand in Spin off parent company does not receive any cash as shares of subsidiary company are issued to existing shareholder in the form of dividend.
- Thus, shareholders in new company remain the same but not in case of Equity curve out.

# Startup Finance

STUDY SESSION 14

## Question 1 :

Compare & Contrast Start-up & entrepreneurship. Describe priorities and challenges which Start-up in India is faced.

(MTP Apr 19, MTP Mar 18, MTP Oct 19, RTP Nov 19)

## Answer :

Start-up financing means some initial infusion of money needed to turn an idea (by starting a business) into reality.

### Differences between a start-up and entrepreneurship

Start-up's are different from entrepreneurship. The major differences between them have been discussed in the following paragraphs:

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

### Priorities and challenges which start-up's in India are facing

The priority is on bringing more and more smaller firms into existence. So, the focus is on need based, instead of opportunity based entrepreneurship. Moreover, the trend is to encourage self - employment rather than large, scalable concerns.

The main challenge with the start-up firms is getting the right talent. And, paucity of skilled workforce can hinder the chances of a start-up organization's growth and development. Further, start-up's had to comply with numerous regulations which escalates it's cost. It leads to further delaying the chances of a breakeven or even earning some amount of profit.

**Question 2 :**

Explain the Basics of Start-up Financing.

**Answer :**

- Some initial infusion of money needed to turn an idea (by starting a business) into reality
- A good way to get success in the field of entrepreneurship is to speed up initial operations as quickly as possible to get to the point where outside investors can see and feel the business venture, as well as understand that a person has taken some risk reaching it to that level.
- In order to successfully launch a business and get it to a level where large investors are interested in putting their money, requires a strong business plan.

**Question 3 :**

Explain some of the innovative ways to finance a start-up.

(MTP Oct 20, MTP March 19, RTP May 20, May 19 Suggested)

**Answer :**

1. Personal financing -

- Most budding entrepreneurs never thought of saving any money to start a business
- Most of the investors will not put money into a deal if they see that you have not contributed any money from your personal sources.

2. Personal credit lines -

- Credit cards are a good example
- Banks are very cautious while granting personal credit lines
- They provide this facility only when the business has enough cash flow to repay the line of credit.

3. Family and friends -

- People who generally believe in you
- The loan obligations to friends and relatives should always be in writing as a promissory note or otherwise.





#### 4. Peer-to-peer lending -

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

#### 5. Crowdfunding -

- Use of small amounts of capital from a large number of individuals to finance a new business initiative
- Makes use of the easy accessibility of vast networks of people through social media and crowdfunding websites
- To bring investors and entrepreneurs together.

#### 6. Microloans -

- Small loans that are given by individuals at a lower interest to a new business ventures
- Can be issued by a single individual or aggregated

#### 7. Vendor financing -

- Company lends money to one of its customers so that he can buy products from the company itself
- Vendor financing also takes place when many manufacturers and distributors are convinced to defer payment until the goods are sold
- Extending the payment terms to a longer period, this depends on one's credit worthiness and payment of more money

#### 8. Purchase order financing -

- Most common scaling problem - inability to find a large new order
- Purchase order financing companies often advance the required funds directly to the supplier.
- This allows the completion of transaction and profit flows up to the new business.

#### 9. Factoring accounts receivables -

- Facility is given to the seller who has sold the good on credit to fund his receivables



till the amount is fully received

- When the goods are sold on credit, and the credit period, factor will pay most of the sold amount up front and rest of the amount later.
- Therefore, in this way, a start-up can meet his day to day expenses.

#### Question 4:

Describe the term Pitch Presentation in context of Start-up Business?

(MTP Oct 18)

#### Answer :

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

Here, some of the methods have been highlighted below as how to approach a pitch presentation:

#### i. Introduction -

- Give a brief account of yourself (who are you? What are you doing?)
- Should be taken to make it short and sweet
- Use this opportunity to get your investors interested in your company
- One can also talk up the most interesting facts about one's business, as well as any huge milestones one may have achieved.

#### ii. Team -

- Introduce the audience the people behind the scenes
- Investors will want to know the people who are going to make the product or service successful
- The investors are not only putting money towards the idea but they are also investing in the team
- Attempt should be made to include the background of the promoter, and how it relates to the new company.
- If possible, it can also be highlighted that the team has worked together in the past and achieved significant results



iii. Problem -

- The promoter should be able to explain the problem he is going to solve and solutions emerging from it.
- In Facebook, you can view a person's profile only if he adds you to his list, customers have no privacy while using Orkut.

 iv. Solution -

- Very important to describe in the pitch presentation as to how the company is planning to solve the problem.
- Flipkart introduce COD in e-commerce
- Flipkart launching their own supply chain management system to deliver orders in a timely manner
- These innovative techniques used by Flipkart enabled them to raise large amount of capital from the investors.

 v. Marketing/Sales -

- Market size of the product must be communicated to the investors
- This can include profiles of target customers, but one should be prepared to answer questions about how the promoter is planning to attract the customers
- If a business is already selling goods, the promoter can also brief the investors about the growth and forecast future revenue.

 vi. Projections or Milestones - (MTP May 20)

- If an organization doesn't have a long financial history, an educated guess can be made.
- Projected financial statements can be prepared which gives an organization a brief idea about where is the business heading?
- It tells us that whether the business will be making profit or loss?
- Financial projections include three basic documents
  - ❖ Income Statement
  - ❖ Cash Flow Statements
  - ❖ Balance Sheet





### vii. Competition -

- Every business organization has competition even if the product or service offered is new and unique.
- Necessary to highlight in the pitch presentation as to how the products or services are different from their competitors
- If any of the competitors have been acquired, their complete details like name of the organization, acquisition prices etc. should also be highlighted.

### viii. Business Model -

- Way in which a company generates revenue and makes a profit from company operations
- Analysts use the term gross profit as a way to compare the efficiency and effectiveness of a firm's business model
- It is better to show the investors a list of the various revenue streams for a business model and the timeline for each of them.
- How to price the product and what does the competitor charge for the same or similar product shall also be highlighted

### ix. Financing -

- It is preferable to talk about how much money has already been raised
- If no money has been raised till date, an explanation can be made regarding how much work has been accomplished with the help of minimum funding that the company is managed to raise

### Question 5 :

What are the Modes of Financing for Start-up's.

OR

Discuss Bootstrapping as a mode of financing for Start-up's.

(MTP Apr,19 , RTP Nov 20)

OR



Briefly explain how Angel Investors finance the Start-up's.

(MTP Oct 20, MTP Oct 19, Nov 18 Suggested)

OR

Characteristics of Venture Capital Financing.

(Nov 19 Suggested)

OR

Explain advantages of bringing Venture Capital in the company

(MTP may 20, May 18 suggested)

Answer :

### Bootstrapping

- Common mistake – unnecessary expenses towards marketing, offices and equipment they cannot really afford
- Here are some of the methods in which a start-up firm can bootstrap:
- Trade Credit
  - When a person is starting his business, suppliers are reluctant to give trade credit.
  - A way out in this situation is to prepare a well-crafted financial plan
  - Next step is to pay a visit to the supplier's office.
  - Communication skills are important here, The financial plan has to be shown
  - The owner or financial officer may give half the order on credit and balance on delivery.
  - Trick here is to get the goods shipped and sell them before paying to them
  - One can also borrow to pay for the good sold but there is interest cost also.
- Factoring
  - Accounts receivable of a business organization is sold to a commercial finance company to raise capital
  - Factoring can be performed on a non-notification basis
  - actually reduce costs associated with maintaining accounts receivable such as bookkeeping, collections and credit verifications
  - In addition to reducing internal costs of a business, factoring also frees up money





that would otherwise be tied to receivables.

### ▪ Leasing

- take the equipment on lease rather than purchasing it.
- It will reduce the capital cost and also help lessee to claim tax exemption.
- The lessor enjoys tax benefits in the form of depreciation
- The lessee benefits by making smaller payments retain the ability to walk away from the equipment at the end of the lease term.
- The lessee may also claim tax benefit in the form of lease rentals paid by him.

### ▪ Angel Investors

- Angel investors invest in small start-up's or entrepreneurs
- Often, angel investors are among an entrepreneur's family and friends.
- Angel investors provide may be a one-time investment
- Ongoing injection of money to support and carry the company through its difficult early stages
- Angel investors are focused on helping start-up's take their first steps, rather than the possible profit they may get from the business.
- Angel investors are the opposite of venture capitalists.
- Angel investors are also called informal investors
- Some angel investors invest through crowdfunding platforms online or build angel investor networks to pool in capital.
- Angel investors typically use their own money, unlike venture capitalists who take care of pooled money from many other investors and place them in a strategically managed fund
- This is why professional angel investors look for opportunities for a defined exit strategy, acquisitions or initial public offerings (IPOs).

### Venture Capital Fund:

- Investment vehicle that manage funds of investors seeking to invest in start-up firms and small businesses with exceptional growth potential
- Money provided by professionals who alongside management invest in young, rapidly



growing companies that have the potential to develop into significant economic contributors.

▪ Venture Capitalists generally

- Finance new and rapidly growing companies
- Purchase equity securities
- Assist in the development of new products or services
- Add value to the company through active participation

▪ Characteristics of Venture Capital Financing

- Long time horizon - 3 to 10 years
- Lack of liquidity - They adjust this liquidity premium against the price and required return.
- High Risk - It works on principle of high risk and high return.
- Equity Participation - help the VC participate in the management and help the company grow.

▪ Advantages of bringing Venture Capital in the company

- It injects long-term equity finance
- The venture capitalist is a business partner, sharing both the risks and rewards.
- Provide practical advice and assistance
- Has a network of contacts in many areas that can add value to the company
- May be capable of providing additional rounds of funding
- Experienced in the process of preparing a company for an Initial Public Offering (IPO)
- They can also facilitate a trade sale

**Question 6 :**

Explain various stages of Venture Capital Funding.

(MTP Aug 18)

**Answer :**

- Seed Money - Low level financing needed to prove a new idea.



- Start-up – Early stage firms that need funding for expenses associated with marketing and product development.
- First-Round – Early sales and manufacturing funds
- Second-Round – Working capital for early stage companies that are selling product, but not yet turning in a profit.
- Third Round – Also called Mezzanine financing, this is expansion money for a newly profitable company
- Fourth-Round – Also called bridge financing, it is intended to finance the "going public" process.

Risk in each stage is different. An indicative Risk matrix is given below.

| Financial Stage | Period (Funds locked in years) | Risk Perception   | Activity to be financed  |
|-----------------|--------------------------------|-------------------|--|
| Seed Money      | 7-10                           | Extreme           | For supporting a concept or idea or R&D for product development and involves low level of financing. |
| Start Up        | 5-9                            | Very High         | Initializing prototypes operations or developing products and its marketing.                         |
| First Stage     | 3-7                            | High              | Started commercials production and marketing.  |
| Second Stage    | 3-5                            | Sufficiently high | Expanding market and growing working   |



|              |     |        |   |
|--------------|-----|--------|---|
|              |     |        | capital need though not earning profit.   |
| Third Stage  | 1-3 | Medium | Market expansion, acquisition & product development for profit making company. Also called Mezzanine Financing. |
| Fourth Stage | 1-3 | Low    | Facilitating public issue i.e. going public. Also called Bridge Financing.                                      |

### Question 7 :

Explain VC Investment Process.

Answer :

#### 1) Deal Origination

- VC operates *directly or through intermediaries.*
- Before sourcing the deal, the VC would inform the intermediary or its employees about the following so that the sourcing entity does not waste time :
  - Sector focus
  - Stages of business focus
  - Promoter focus
  - Turn over focus

#### 2) Screening

- Once the deal is sourced the same would be sent for screening by the VC.
- Screening is generally *carried out by a committee* consisting of senior level people of the VC





- Once the screening happens, it would select the company for further processing

### 3) Due Diligence

- Once the decision is taken to proceed further, the VC would now carry out due diligence
- This is mainly the process by which the VC would try to verify the veracity of the documents taken.
- This is generally handled by external bodies, mainly renowned consultants.
- The fees of due diligence are generally paid by the VC

### 4) Deal Structuring

- Deal is structured in such a way that both parties win
- The convertible structure is brought in to ensure that the promoter retains the right to buy back the share
- Many structures to facilitate the exit, the VC may put a condition that promoter has also to sell part of its stake along with the VC

### 5) Post Investment Activity

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

### 6) Exit plan

- VC would ask the promoter or company to spell out in detail the exit plan. Mainly, exit happens in two ways
  - One way is 'sell to third party(ies)'
  - The second way to exit is that promoter would give a buy back commitment at a pre agreed rate

### Question 8 :

Write a short note on Venture Capital Funds in India.

Answer :

- First all India venture capital funding was started by IDBI, ICICI and IFCI.
- The World Bank organized a VC awareness seminar, giving birth to players like: TDICICI, GVFL, Canbank and Pathfinder

Question 9 :

Explain Structure of Venture Capital Fund in India.

Answer :

- Domestic Funds – are usually structured as:
  - Domestic vehicle for the pooling of funds from the investor
  - A separate investment adviser that carries those duties of asset manager
- Offshore Funds – Two common alternatives available to offshore investors are: the “offshore structure” and the “unified structure”.
  - Offshore structure – an investment vehicle (an LLC or an LP organized in a jurisdiction outside India) makes investments directly into Indian portfolio companies. Typically, the assets are managed by an offshore manager, while the investment advisor in India carries out the due diligence and identifies deals
  - Unified Structure – When domestic investors are expected to participate in the fund, a unified structure is used. Overseas investors pool their assets in an offshore vehicle that invests in a locally managed trust, whereas domestic investors directly contribute to the trust. This is later device used to make the local portfolio investments

Question 10 :

What is a start-up to avail the benefits of government scheme?

(Nov 19 Suggested)

Answer :

An entity shall be considered as a Start-up

- Up to 10 years from its date of incorporation / registration



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

### Question 11 :

Explain Co-location/Proximity Hosting.

(RTP May 19)

### Answer :

- The co-location or proximity hosting is a facility which is offered by the stock exchanges to stock brokers and data vendors whereby their trading or data-vending systems are allowed to be located within or at close proximity to the premises of the stock exchanges,
- Moreover, pursuant to the recommendations of the Technical Advisory Committee (TAC) of SEBI, stock exchanges are advised to allow direct connectivity between co-location facility of one recognized stock exchange and the colocation facility of other recognized stock exchanges.
- Stock exchanges are also advised to allow direct connectivity between servers of a stock broker placed in colocation facility of a recognized stock exchange and servers of the same stock broker placed in colocation facility of a different recognized stock exchange.
- Further, in light of the public comments received and in consultation with Technical Advisory Committee (TAC) of SEBI and Secondary Market Advisory Committee (SMAC) of SEBI and in order to facilitate small and medium sized Members
- SEBI has directed the stock exchanges to introduce 'Managed Co-location Services',
- Under this facility, space/rack in co-location facility shall be allotted to eligible vendors by the stock exchange along with provision for receiving market data for further dissemination of the same to their client members and the facility.

