

7th Edition

CA Final

Advanced Financial Management (AFM)

Theory Book

CA. Nagendra Sah

FCA, CFA L1, B. Sc. (H), Vishwa Sewa Ratna Award (2022) winner from World Service Organization, Stock Market Expert, Highest Mark scorer in SFM, Best paper award winner in Mathematics and Statistics in B. Sc.

CONTENTS

CHAPTER	PAGES
1. Financial Policy and corporate Strategy	1.1 to 1.10
2. Risk Management	2.1 to 2.8
3. Security Analysis	3.1 to 3.16
4. Security Valuation	4.1 to 4.8
5. Portfolio Management	5.1 to 5.8
6. Securitization	6.1 to 6.12
7. Mutual Fund	7.1 to 7.14
8. Derivative Analysis & Valuation	8.1 to 8.18
9. Foreign Exchange Exposure & Risk Management	9.1 to 9.10
10. International Financial Management	10.1 to 10.14
11. Interest Rate Risk Management	11.1 to 11.6
12. Corporate Valuation	12.1 to 12.12
13. Merger Acquisition & Corporate Restructuring	13.1 to 13.6
14. Startup Finance	14.1 to 14.14

OUR TOP SCORERS STUDENTS



PRAVIN DUTT SHARMA
AIR
3RD Rank



SONAM SHARMA
AIR
6TH Rank



DINESH MEHRA
AIR
7TH Rank



MANSI NARANG
AIR
16TH Rank



NIRMAL SINGH RAWAT
AIR
20TH Rank



KUSH CHITKARA
AIR
26TH Rank



NIKHIL AGARWAL
AIR
26TH Rank



RITU AGARWAL
AIR
28TH Rank



AASHNA MALHOTRA
AIR
29TH Rank



VANYA RASTOGI
AIR
31ST Rank



VIVEK MITTAL
AIR
39TH Rank



PRASHANSA JOSHI
AIR
44TH Rank



SIDDHARTH DEB
AIR
44TH Rank



NAVIN PRAKASH
96
MARKS



TANAY PANDEY
95
MARKS



ARUN POKHREL
95
MARKS



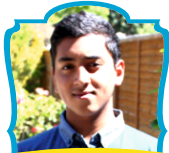
NITESH PRASAD
95
MARKS



KOMAL YADAV
94
MARKS



ASHIK ACHARYA
91
MARKS



AKASH ARORA
91
MARKS



DEEPI T GARG
91
MARKS



SHUBHAM KUMAR SINGH
91
MARKS



SANTOSH THAPA
90
MARKS



V.SRI RAGHAVAN
90
MARKS



KAPIL KUMAR
90
MARKS



SAHIL
90
MARKS



MAYANK GUPTA
89
MARKS



VIVEK AGARWAL
89
MARKS



DINESH KUMAR
88
MARKS



NITIN AGARWAL
88
MARKS



ANCHAL CHAUHAN
88
MARKS



RACHIT BANSAL
88
MARKS



MUNCHUN KUMAR
88
MARKS



SANJAY RASTOGI
87
MARKS

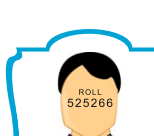
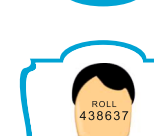


SIDDHARTH JAIN
87
MARKS

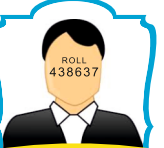
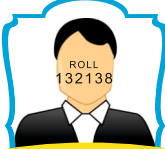
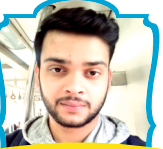
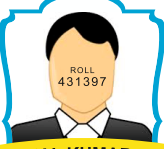
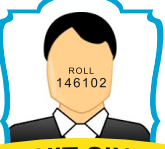
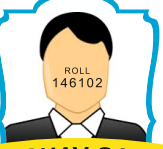


SURAJ WADHWA
87
MARKS

OUR TOP SCORERS STUDENTS

 DIKSHA SINGH PARIHAR 87 MARKS	 ANKIT JAIN 87 MARKS	 VISHAN GHIMIRE 86 MARKS	 SANOSH CHOUDHARY 86 MARKS	 LALIT KANDOI 86 MARKS	 ANIMESH KHERWAR 86 MARKS
 ANIMESH KHERWAR 86 MARKS	 MANIT JINDAL 85 MARKS	 ASHWIN SHRESTHA 85 MARKS	 RAGHAV SOOD 85 MARKS	 NISHIKANT SHARMA 85 MARKS	 YANENDRA CHALAUNE 85 MARKS
 DHARMEDRA KUMAR 85 MARKS	 NITESH THAPAMAGAR 85 MARKS	 TEJASWANI NAYAR 85 MARKS	 ARUL RAJ KUMAR 85 MARKS	 RAHUL JAIN 85 MARKS	 SANTOSH KUMAR 84 MARKS
 SHIKHA AGGARWAL 84 MARKS	 USHA RANI 84 MARKS	 DEEKSHA SINGH 84 MARKS	 MANJITA KHADKA 84 MARKS	 MAHENDRA GUPTA 84 MARKS	 SAKSHAM JAIN 83 MARKS
 ANISHA TAYA 83 MARKS	 JAY PRAKSH 83 MARKS	 DHEERAJ 83 MARKS	 MANISH PAUDEL 83 MARKS	 ANIRUDH GUPTA 83 MARKS	 NEHA AGRAWAL 83 MARKS
 VIKASH DUBEY 83 MARKS	 SANDEEP KUMAR DIWANIYA 83 MARKS	 RANJEET BHANDAR 82 MARKS	 JATIN SHARMA 82 MARKS	 CHETAN SURI 82 MARKS	 ROHIT GUPTA 82 MARKS

OUR TOP SCORERS STUDENTS

 BHAVISHYA BANSAL 82 MARKS	 ROSHAN SINGH 82 MARKS	 RITU SINGH 82 MARKS	 SHIVANI GILHOTRA 82 MARKS	 CHETAN SURI 82 MARKS	 TANUJ KUMAR 82 MARKS
 AKASH KUMAR JHA 82 MARKS	 ANJANI TELTIA 82 MARKS	 GOVIND TAMANG 82 MARKS	 AMIT KARN 82 MARKS	 RAHUL PRASAD 81 MARKS	 AMAN JHUN JHUN WALA 81 MARKS
 SHUBHAM AGARWAL 81 MARKS	 SADDAM HUSSAIN 81 MARKS	 SHIV NARAYAN SINGH 81 MARKS	 MANOJ JAKHMOLA 81 MARKS	 RICHA AGRAWAL 81 MARKS	 NIRANJANA MAHATO 81 MARKS
 ROHIT AGGARWAL 81 MARKS	 AMIT SHUKLA 81 MARKS	 SHAMA KHAN 81 MARKS	 SUMIT AHUJA 80 MARKS	 UJJWAL GOEL 80 MARKS	 KRISHNA KANT SHAH 80 MARKS
 ROHIT AGGARWAL 80 MARKS	 BISHAL KUMAR JHA 80 MARKS	 ROHIT SINHA 79 MARKS	 KESHAV GARG 79 MARKS	 ANSHUMAN GOEL 79 MARKS	 CMA ANUPRIYA SINGH 79 MARKS
 RESHAM BHANDARI 79 MARKS	 HARSHITA SINGH 79 MARKS	 ROHIT SINHA 78 MARKS	 MANISH KUMAR 78 MARKS	 SHUBHAM JAIN 78 MARKS	 MD ZOHAIB BELAL 78 MARKS

OUR TOP SCORERS STUDENTS



ARJUN K KUSHWAHA

77
MARKS



DHEERAJ SAINI

77
MARKS



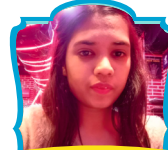
KRISHNA GOYAL

77
MARKS



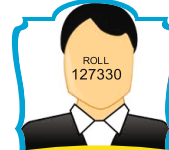
ANIRUDH SAH

77
MARKS



PUJA AGARWAL

77
MARKS



MADAN POKHREL

77
MARKS



NIKHIL BANSAL

77
MARKS



ARUN KUMAR

77
MARKS



CHANDAN K. SINGH

77
MARKS



ASHWANI SRIVASTAVA

77
MARKS



AMIT KUMAR SHARMA

77
MARKS



VIKAS KAUSHIK

77
MARKS



DHARMENDRA PANDIT

76
MARKS



SANTOSH KUMAR

76
MARKS



SHIVAM GUPTA

76
MARKS



ADAMYIA PRATAP SINGH

76
MARKS



PRATHEEL JAIN

76
MARKS



PUNEET KUKREJA

76
MARKS



SONU KUMAR

76
MARKS



SANTOSH KUMAR

76
MARKS



JYOTI RUSTGI

76
MARKS



RIYA GAUR

76
MARKS



MIRZA YASEEN BAJG

76
MARKS



RATEEK DIWAN

76
MARKS



CHIRAG JAIN

76
MARKS



AKHTAR RAJA

76
MARKS



DEEPANSHU JAIN

76
MARKS



SONU KUMAR

76
MARKS



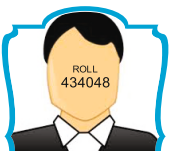
SUNIL SHRESTHA

76
MARKS



SURYANSH JAIN

76
MARKS



RAJAT JAIN

76
MARKS



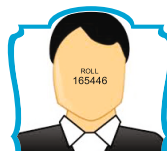
RIWAZ KHADKA

76
MARKS



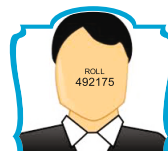
MOHIT CHHABRA

76
MARKS



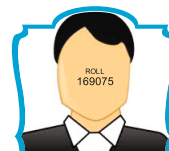
VIKAS KAUSHIK

76
MARKS



OHAN DUTTA

76
MARKS



SAGAR SHRESTHA

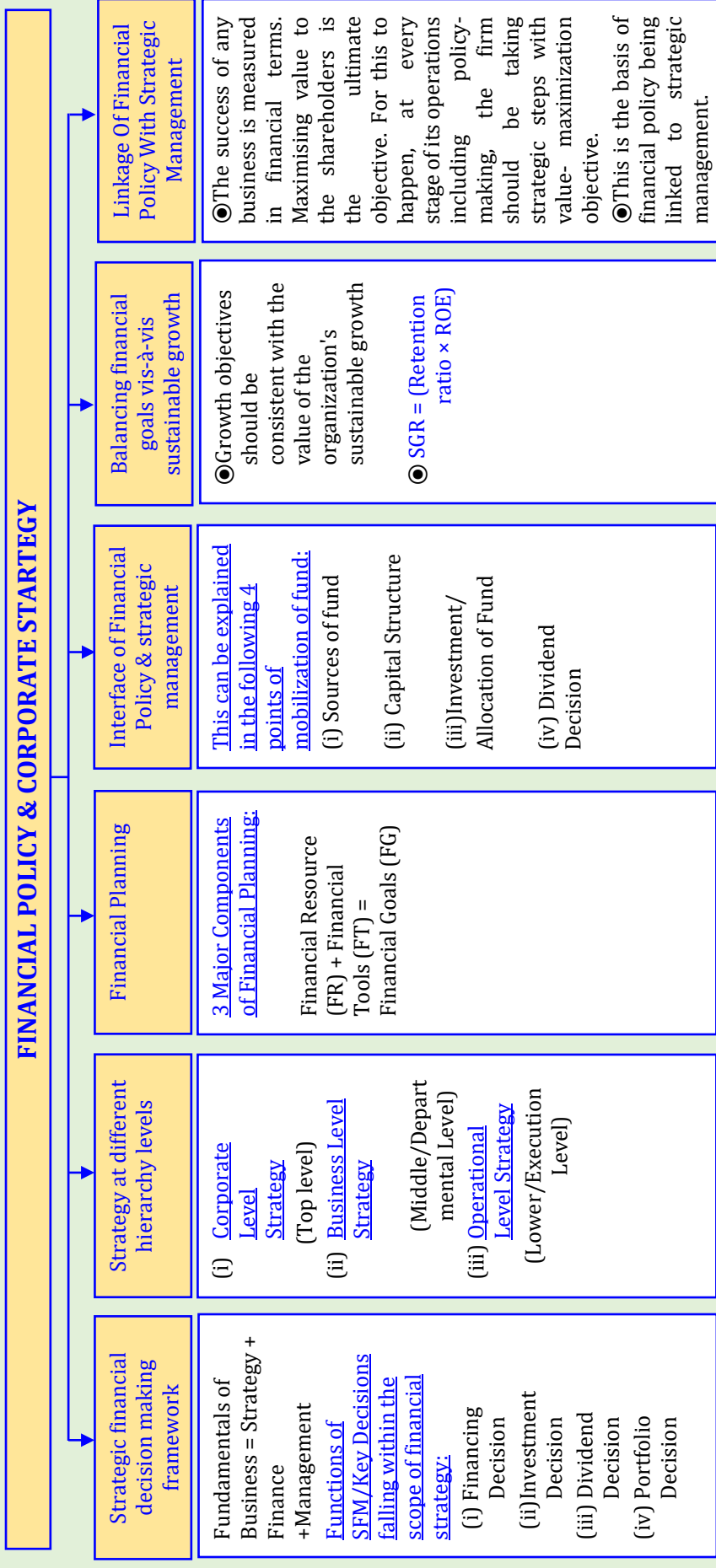
76
MARKS

Chapter - 1

FINANCIAL POLICY AND CORPORATE STRATEGY

Contents

1. ADVANCED ROLE OF CFO IN VARIOUS MATTERS INCLUDING VALUE CREATION	3
2. STRATEGIC FINANCIAL DECISION-MAKING FRAMEWORK	3
3. FUNCTIONS OF STRATEGIC FINANCIAL MANAGEMENT	3
4. STRATEGY AT DIFFERENT HIERARCHY LEVEL.....	4
(1) CORPORATE LEVEL.....	4
(2) BUSINESS UNIT LEVEL; AND	4
(3) FUNCTIONAL OR DEPARTMENTAL LEVEL.	4
5. FINANCIAL PLANNING	5
6. INTERFACE OF FINANCIAL POLICY AND STRATEGIC MANAGEMENT	6
7. BALANCING FINANCIAL GOALS VIS-À-VIS SUSTAINABLE GROWTH	7
8. WHAT MAKES AN ORGANIZATION FINANCIALLY SUSTAINABLE? AND	8
9. WHAT MAKES AN ORGANIZATION SUSTAINABLE?.....	8
10. LINKAGE OF FINANCIAL POLICY WITH STRATEGIC MANAGEMENT	9

SUMMARY:

ADVANCED ROLE OF CFO IN VARIOUS MATTERS INCLUDING VALUE CREATION

ADVANCED ROLE	
a. Risk Management:	Now a days the CFOs are expected to look after the overall functioning of the framework of Risk Management system of an organisation.
b. Supply Chain:	Post pandemic supply chain management system has been posing the challenge for the company to maintain the sustainable growth. Since CFOs are care takers of finance of the company, considering the financial viability of the Supply Chain Management their role has now become more critical.
c. Mergers, acquisitions, and Corporate Restructuring:	Since in recent period to maintain the growth and capture the market share there has been a spate of Mergers and Acquisitions and hence the role of CFOs has become more crucial because these are strategic decision and any error in them can lead to collapse of the whole business.
d. Environmental, Social and Governance (ESG) Financing:	With the evolving of the concept of ESG their role has been shifted from traditional financing to sustainability financing.

STRATEGIC FINANCIAL DECISION-MAKING FRAMEWORK

- ⇒ The investors want to **maximize their wealth** by selecting **optimum investment** and financial opportunities that will give them **maximum expected returns at minimum risk**.
- ⇒ Since management is ultimately responsible to the investors, the objective of strategic financial management should implement investment and financing decisions which should satisfy the shareholders and increase their return.
- ⇒ Therefore, all business need to have the following three fundamental essential elements:
 - (i) A clear and realistic **Strategy**
 - (ii) The **financial** resources, controls, and systems to see it through and
 - (iii) The right **Management** team and processes to make it happen.

Strategy + Finance + Management = Fundamentals of Business

Strategy:	Strategy may be defined as the long-term direction and scope of an organization to achieve competitive advantage through the configuration of resources within a changing environment for the fulfilment of stakeholder's aspirations and expectations
Finance	Resources that generate fund for their business.
Management	Persons ultimately responsible for investor and whose objective is to maximise their wealth at minimum risk.
Strategic Financial Management	Strategic Financial Management is the combination of the corporate strategic plan that embraces the optimum investment and financing decisions required to attain the overall specified objectives. It is basically about the identification of the possible strategies capable of maximizing an organization's market value.

FUNCTIONS OF STRATEGIC FINANCIAL MANAGEMENT

Question: [Nov-2019-4M] [MTP-Nov-2019-4M] [RTP-Nov-2020] [MTP-May-2021]

Discuss briefly the key decisions which falls within the scope of financial strategy.

Question: [Jan-2021-4M] [MTP-May-2023]

As a financial strategist you will depend on certain key financial decisions. Discuss.

Answer:

Strategic Financial Management is the **combination** 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.

(i) Strategy	Strategy is a long-term course of action and senior management decides Strategy
(ii) Tactics	Tactics are intermediate plan and Middle level decides tactics; and
(iii) Operations	Operations are short-term functions, and these are looked after line management

According to agency theory, strategic financial management is the function of following four major components or, **key decisions falling within the scope of financial strategy include** the following:

(I) FINANCING DECISIONS	These decisions deal with the mode of financing or mix of equity capital and debt capital.
(II) INVESTMENT DECISIONS	These decisions involve the profitable utilization of firm's funds especially in long-term projects (capital projects). Since the future benefits associated with such projects are not known with certainty, investment decisions necessarily involve risk. The projects are therefore evaluated in relation to their expected return and risk.
(III) DIVIDEND DECISION	These decisions determine the division of earnings between payments to shareholders and reinvestment in the company.
(IV) PORTFOLIO DECISION	These decisions involve evaluation of investments based on their contribution to the aggregate performance of the entire corporation rather than on the isolated characteristics of the investments themselves.

STRATEGY AT DIFFERENT HIERARCHY LEVEL

Question: [Nov-2018-Old-4M]

Enumerate, Strategy at different levels of hierarchy.

Question: [July-2021-4M]

State the strategy at different hierarchy levels.

Question: [MTP-Nov-2023]

Explain the term Corporate Level Strategy and what are the three basic questions it answers?

Answer:

Strategies at different levels are the outcomes of different planning needs. There are three levels of Strategy:

(1) CORPORATE LEVEL.

(2) BUSINESS UNIT LEVEL; AND

(3) FUNCTIONAL OR DEPARTMENTAL LEVEL.

STRATEGY	DESCRIPTION	
CORPORATE LEVEL STRATEGY <u>[Nov-2023-4M]</u>	Corporate level strategy fundamentally is concerned with selection of businesses in which a company should compete and also with the development and coordination of that portfolio of businesses.	
	Corporate level strategy should be able to answer three basic questions:	
	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.

BUSINESS UNIT LEVEL STRATEGY	⇒ Strategic business unit may be any profit centre that can be planned independently from the other business units of a corporation. ⇒ At the business unit level, the strategic issues are about practical coordination of operating units and developing and sustaining a competitive advantage for the products and services that are produced.
FUNCTIONAL OR DEPARTMENTAL LEVEL	⇒ Functional level involves the development and coordination of resources through which business unit level strategies can be executed effectively and efficiently. ⇒ Functional units of an organization are involved in higher level strategies by providing input to the business unit level and corporate level strategy, such as providing information on customer feedback or on resources and capabilities on which the higher-level strategies can be based. ⇒ Once the higher-level strategy is developed, the functional units translate them into discrete action plans that each department or division must accomplish for the strategy to succeed. ⇒ Among the different functional activities viz production, marketing, finance, human resources and research and development, finance assumes highest importance during the top down and bottom-up interaction of planning.

FINANCIAL PLANNING

⇒ 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: $FR + FT = FG$



⇒ For an individual, financial planning is the process of meeting one's life goals through proper management of the finances. These goals may include buying a house, saving for children's education or planning for retirement.

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

⇒ Financial measures like ratio analysis, analysis of cash flow statement are used to evaluate the performance of the company. The selection of these measures again depends upon the corporate objectives.

Question: [May-2022-4M] [MTP-Nov-2022]

Explain the outcomes of Financial Planning.

Question: [May-2022-4M] [MTP-Nov-2022]

Financial Resources, Financial Tools and Financial Goals are outcomes of Financial Planning. Do you agree with this statement?

Answer:

Outcomes of the financial planning are:

- Financial Objectives:** Financial objectives are to be decided at the very outset so that rest of the decisions can be taken accordingly. The objectives need to be consistent with the corporate mission and corporate objectives.
- Financial Decision Making:** Financial decision making helps in analysing the financial problems that are being faced by the corporate and accordingly deciding the course of action to be taken by it.

- (iii) **Financial Measures:** The financial measures like ratio analysis, analysis of cash flow statement etc. are used to evaluate the performance of the Company. The selection of these measures again depends upon the corporate objective.

INTERFACE OF FINANCIAL POLICY AND STRATEGIC MANAGEMENT

Question: [May-2018-New-4M] [SM-TYKQ] [Nov-2012-Old-4M] [Nov-2009-Old-6M]

Explain the interface of financial policy and strategic management.

Question: [May-2016-Old-4M]

Write short notes on interface of financial policy and strategic management.

Answer:

⇒ The interface of strategic management and financial policy will be clearly understood if we appreciate the fact that the starting point of an organization is money and the end point of that organization is also money. ⇒ No organization can run an existing business and promote a new expansion project without a suitable internally mobilized financial base or both i.e. internally and externally mobilized financial base. ⇒ Mobilization of fund is explained below:	
(1) SOURCES OF FUND	⇒ Sources of finance is the most important dimensions of a strategic plan. The generation of funds may arise out of ownership capital and or borrowed capital. ⇒ A company may issue equity shares and/or preference shares for mobilizing ownership capital and debentures to raise borrowed capital. Public deposits, for a short and medium term finance. ⇒ The overdraft, cash credits, bill discounting, bank loan and trade credit are the other sources of short-term finance
(2) CAPITAL STRUCTURE	⇒ Policy makers should decide on the capital structure to indicate the desired mix of equity capital and debt capital. ⇒ There are some norms for debt equity ratio which need to be followed for minimizing the risks of excessive loans. For instance, - public sector organizations=1:1 ratio and - Private sector firms = 2:1 ratio. It may vary from industry to industry
(3) INVESTMENT AND FUND ALLOCATION DECISION	⇒ Another important dimension of strategic management and financial policy interface is the investment and fund allocation decisions. ⇒ A planner has to frame policies for regulating investments in fixed assets and for current assets. ⇒ Project evaluation and project selection are two most important jobs under fund allocation. Planner has to make best possible allocation under resource constraints.
(4) DIVIDEND POLICY	⇒ Dividend policy is yet another area for making financial policy decisions affecting the strategy performance of the company. ⇒ Dividend policy decision deals with the extent of earnings to be distributed as dividend and the extent of earnings to be retained for future expansion scheme of the firm. ⇒ From the point of view of long-term funding of business growth, dividend can be considered as that part of total earnings, which cannot be profitably utilized by the company. ⇒ Stability of the dividend payment is a desirable consideration that can have a positive impact on share prices.

BALANCING FINANCIAL GOALS VIS-À-VIS SUSTAINABLE GROWTH

Question: [MTP-Nov-2018-4M] [MTP-May-2019-4M] [MTP-Nov-2022]

Explain balancing financial goals vis-à-vis sustainable Growth

Question: [SM-TYKQ] [May-2014-Old-4M]

Write short notes on balancing financial goals vis-à-vis sustainable Growth

Question: [RTP-Aug-2020]

How Financial Goals Can be balanced vis-a-vis Sustainable Growth?

Question: [MTP-May-2022]

Often, a conflict can arise if growth objectives are not consistent with the value of the organization's sustainable growth. EXPLAIN.

Answer:

- ⇒ The sustainable growth rate is a measure of how much a firm can grow without borrowing more money.
- ⇒ A conflict can arise if growth objectives are not consistent with the value of the organization's sustainable growth. Hence, managers have to consider the financial consequences of sales increase and to set sales growth goals that are consistent with the operating and financial policies of the firm.
- ⇒ Sustainable growth is important to enterprise **long-term development**.

Following is an **example** of stable growth strategy adopted by the oil industry as a whole under resource constraints (i.e. limited resources) and the long run objective of survival over years.

In fuel industry, **resources are limited in quantity** but **save fuel campaign**, which is against sales growth strategy, speaks for **conservation of fuel for their use across generation**.



Save fuel campaign is against sales growth strategy but helps to conserve fuel for uses across generation and to maintain long term stable growth.

Sustainable growth rate (SGR) depends upon retention ratio and reinvestment rate (i.e. Return on Equity (ROE))

Mathematically,

$$\begin{aligned} \text{SGR} &= (\text{Retention ratio} \times \text{ROE}) \\ \text{or, SGR} &= (1 - \text{Dividend pay-out Ratio}) \times \text{ROE} \end{aligned}$$

Sustainable growth models assumes that the business wants to:

- (1) Maintain a target capital structure without issuing new equity.
- (2) Maintain a target dividend payment ratio; and
- (3) Increase sales as rapidly as market conditions allow.

WHAT MAKES AN ORGANIZATION FINANCIALLY SUSTAINABLE? AND WHAT MAKES AN ORGANIZATION SUSTAINABLE?

Question: [May-23-4M] [RTP-May-21] [MTP-Nov-23] [MTP-May-23] [MTP-May-2022] [MTP-May-2021]

Explain the specific steps that make an organisation sustainable.

Answer:

WHAT MAKES AN ORGANISATION FINANCIALLY SUSTAINABLE?	
To be financially sustainable, an organisation must:	
(i)	have more than one source of income;
(ii)	have more than one way of generating income;
(iii)	do strategic, action and financial planning regularly;
(iv)	have adequate financial systems;
(v)	have a good public image;
(vi)	be clear about its values (value clarity); and
(vii)	Have financial autonomy.

WHAT MAKES AN ORGANISATION SUSTAINABLE?	
In order to be sustainable, an organisation must:	
(i)	have a clear strategic direction;
(ii)	be able to scan its environment or context to identify opportunities for its work;
(iii)	be able to attract, manage and retain competent staff;
(iv)	have an adequate administrative and financial infrastructure;
(v)	be able to demonstrate its effectiveness and impact in order to leverage further resources; and
(vi)	Get community support for, and involvement in its work.

Question: [MTP-May-2021]

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

Answer:

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

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

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

Sustainable growth models assume that the business wants to:

- (1) maintain a target capital structure without issuing new equity;
- (2) maintain a target dividend payment ratio; and
- (3) increase sales as rapidly as market conditions allow.

LINKAGE OF FINANCIAL POLICY WITH STRATEGIC MANAGEMENT

Question: [May-2010-Old-4M]

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 policy-making, 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.

Important Notes:

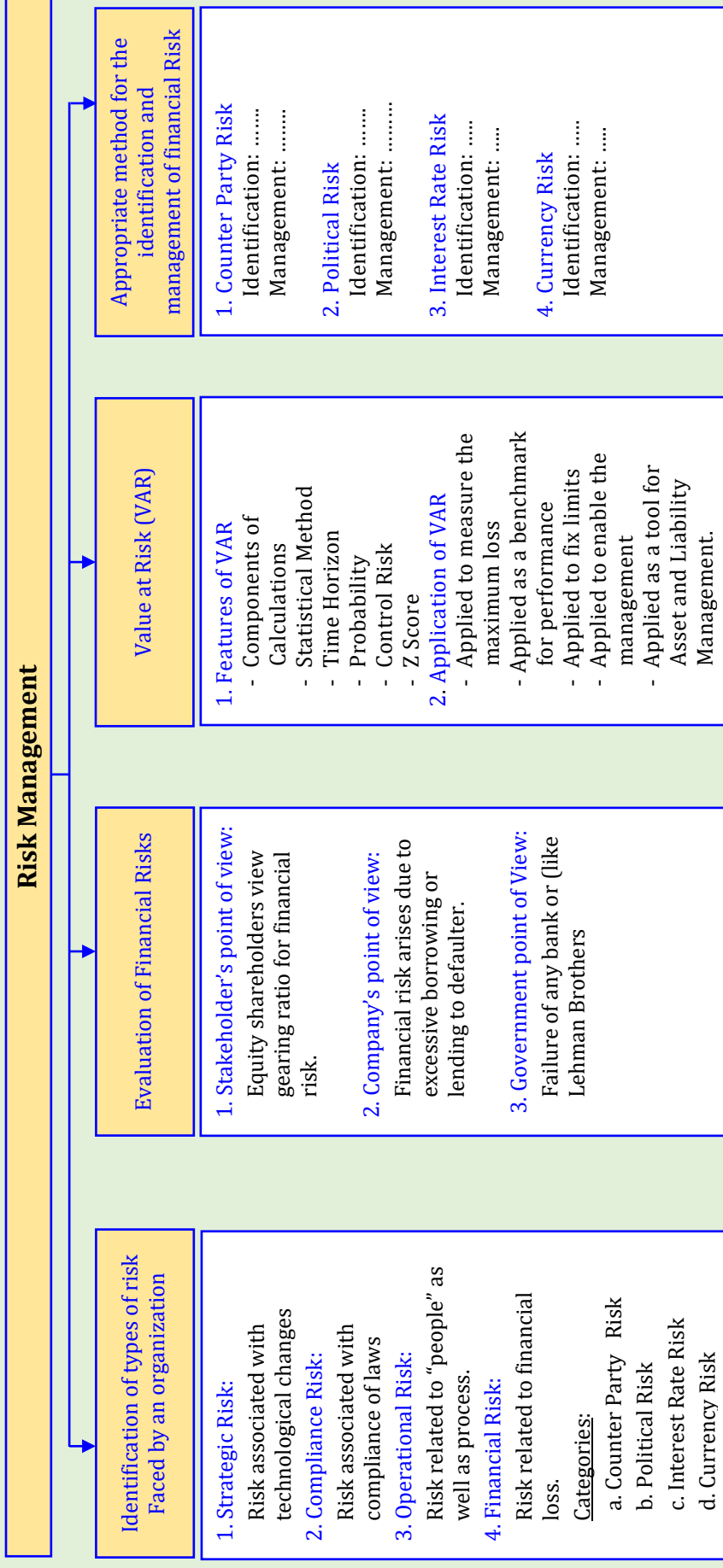


Chapter - 2

RISK MANAGEMENT

Contents

A. Identification of types of risk Faced by an organization	3
STRATEGIC RISK	3
COMPLIANCE RISK	3
OPERATIONAL RISK	3
FINANCIAL RISK	3
B. EVALUATION OF FINANCIAL RISK	4
STAKEHOLDER'S POINT OF VIEW	4
COMPANY POINT OF VIEW	4
GOVERNMENT POINT OF VIEW	4
C. VALUE-AT-RISK (VAR)	4
FEATURES OF VAR:	4
WHAT ARE THE APPLICATIONS OF VALUE AT RISK (VAR)?	5
APPLICATION OF VAR OR SIGNIFICANCE OF VAR:	5
D. APPROPRIATE METHODS FOR IDENTIFICATION AND MANAGEMENT OF FINANCIAL RISK	5
1. COUNTER PARTY RISK	5
2. POLITICAL RISK	5
3. INTEREST RATE RISK	5
4. CURRENCY RISK	5

SUMMARY:

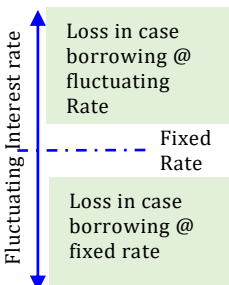
IDENTIFICATION OF TYPES OF RISK FACED BY AN ORGANIZATION

Question: [MTP-May-2022]

EXPLAIN the main risk that can be faced by an overseas investor.

Answer:

A business organization faces many types of risks. Important among them are discussed as below.

Strategic Risk	Meaning	A successful business needs a comprehensive, well-thought-out business plan. If things change, even the best-laid plans can become outdated if it cannot keep pace with the latest trends. Hence, we can say, Strategic risk is a risk in which a company's strategy becomes less effective due to technological changes, a new competitor entering into market, shifts of customer demand etc.				
	Example	Nokia when it failed to upgrade its technology to develop touch screen mobile phones. That delay enables Samsung to become a market leader in touch screen mobile phones. Kodak considered digital camera as threat to its core business and failed to develop it and left behind. <u>Positive example:</u> Xerox , famous for Photocopy machine, was quick to develop laser printing, when laser printing was developed. So, it survived.				
Compliance Risk <u>[May-2022-4M]</u>	Meaning	Every business needs to comply with rules and regulations. Noncompliance leads to penalties in the form of fine and imprisonment. If the company fails to comply with laws related to a new area or industry or sector, it will pose a serious threat to its survival. This is called compliance risk.				
	Example	Company pursuing cement business likely to venture into sugar business in a different state. But laws applicable to the sugar mills in that state are different. So, that poses a compliance risk.				
Operational Risk <u>[May-2022-4M]</u>	Meaning	Operational risk relates to “people” as well as process. It is a type of internal risk. It relates to failure on the part of the company to cope with day to day operational problems.				
	Example	An employee paying out ₹1,00,000 from the account of the company instead of ₹10,000. In this case, organization can employ another person to check the work of that person who has mistakenly paid 1,00,000 or install an electronic system that can flag off an unusual amount.				
Financial Risk	Meaning	Financial risk is referred as the unexpected changes in financial conditions such as prices, exchange rate, Credit rating and interest rate including financial loss due to unexpected political changes.				
	Categorises	Counter Party Risk	Political Risk	Interest Rate Risk	Currency Risk	Liquidity Risk
		It occurs due to non-honoring of obligations by the counter party. It covers the credit risk i.e. default by the counter party. E.g. Default of seller in uploading tax invoice in GSTR-1 affects the bona fide purchaser to claim input tax credit of purchase made.	It is generally faced by overseas investors, as the adverse action by the government of host country which may lead to huge losses. E.g. Confiscation of overseas properties; Invalidation of Patents, Restriction as borrowings, Remittance restriction etc.	It occurs due to change in interest rate resulting in change in asset and liabilities. It is more important for banking companies as their balance sheet's items are more interest sensitive. 	It affects the organization dealing with foreign exchange as their cash flows changes with the movement in the currency exchange rates. E.g. If rupee depreciates vis-a-vis US\$ receivable (exporter) will stand to gain whereas to the US\$ payable (importer) will stand to lose.	Liquidity risk can be defined as inability of organization to meet its liabilities whenever they become due. It arises due to mismatch in period of cash flow generation. E.g. Most of the organization faced liquidity problem in Lockdown against coronavirus as inflow stopped but outflows continued. This type of calamity generates liquidity risk.

EVALUATION OF FINANCIAL RISK

Question: [MTP-May-2018-New-4M]

Explain financial risk from the point of view of stakeholder, company and government.

Question: [SM-TYKQ] [MTP-May-2020] [MTP-Nov-2023] [MTP-Nov-2022]

The Financial Risk can be viewed from different perspective. Explain

Question: [Nov-2018-New-4M] [MTP-May-2021]

How different stakeholders view the financial risk?

Question: [RTP-Nov-2020] [MTP-Nov-2021]

What is Financial Risk? How it can be evaluated from point of views.

Answer:

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

Stakeholder's point of view	Major stakeholders of a business are Equity shareholders, and they view financial gearing (i.e. ratio of debt in capital structure of company) as risk since in event of winding up of a company they will be least prioritized. Even for a lender, existing gearing is also a risk since company having high gearing faces more risk in default of payment of interest and principal repayment.
Company point of view	From company's point of view, if a company borrows excessively or lend to someone who defaults, then it can be forced to go into liquidation.
Government point of view	From Government's point of view, the financial risk can be viewed as failure of any bank (like Lehman Brothers) or down grading of any financial institution leading to spread of distrust among society at large. Even this risk also includes willful defaulters. This can also be extended to sovereign debt crisis .

VALUE-AT-RISK (VAR)

Question: [RTP-May-2018-New-4M]

Describe value at risk and its application.

Question: [MTP-Nov-2018-New-4M] [SM-TYKQ] [MTP-May-2022]

Explain the features of value at risk (VAR)

Explain the significance of VAR

Question: [RTP-June-2020-New]

What is value at risk? Identify its main features

Question: [July-2021-4 marks] [MTP-May-2023]

Describe the main features of Value-at-Risk (VAR).

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. This investment can be a portfolio, capital investment or foreign exchange etc.

VAR answers two basic questions -

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

FEATURES OF VAR:

Components of Calculations	Based on following three components: (a) Time Period (b) Confidence level: Generally 95% and 99% (c) 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
Control Risk	Risk can be controlled by setting limits for maximum loss.
Z Score	Z score indicates how many standard Deviations is away from Mean value of a population. When it is multiplied with Standard Deviation, it provides VAR.

Question: [Nov-2022-4 marks]

What are the applications of Value At Risk (VAR)?

Answer:

APPLICATION OF VAR OR SIGNIFICANCE OF VAR:

VAR can be applied:	
(i)	to <i>measure the maximum possible loss</i> on any portfolio or a trading position.
(ii)	as a <i>benchmark for performance measurement</i> of any operation or trading.
(iii)	to <i>fix limits</i> for individuals dealing in front office of a treasury department.
(iv)	to enable the management to <i>decide the trading strategies</i> .
(v)	as a <i>tool for Asset and Liability Management</i> especially in banks

APPROPRIATE METHODS FOR IDENTIFICATION AND MANAGEMENT OF FINANCIAL RISK

Question: [RTP-Nov-2018-New] [RTP-Nov-2019-New] [MTP-Nov-2019-New-4M]

Explain the various parameters to identify the currency risk

Answer: 4th part point (A)

Question: [MTP-Nov-2019-New-4M]

Briefly explain counter party risk and various techniques to manage this risk

Question: [MTP-Nov-2023]

What do you mean by term "Counter Party Risk". Explain various hints that may provide an indicator of the same risk.

Question: [Dec-2021 -4M]

Which type of risk covers the default by the counterparty? List out the ways to *manage* this type of risk.

Answer:

Financial risk has been categorized in four parts. Appropriate methods for identification and management can be discussed below:

1. Counter Party Risk
2. Political Risk
3. Interest Rate Risk
4. Currency Risk

1. Counter Party Risk

[MTP-N19]

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

1. Failure to obtain necessary resources to complete the project or transaction undertaken.
2. Any regulatory restrictions from the Government.
3. Hostile action of foreign government.
4. Let down by third party.
5. Have become insolvent.

This risk occurs due to non-honoring of obligations by the counter party which can be failure to deliver the goods for the payment already made or vice-versa or repayment of borrowings and interest etc. Thus, this risk also covers the credit risk i.e. default by the counter party.

	(B) 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 [RTP-M21]	(A) Since this risk mainly relates to investments in foreign country, company should assess country 1. By referring political ranking published by different business magazines. 2. By evaluating country's macro-economic conditions. 3. By analysing the popularity of current government and assess their stability. 4. By taking advises from the embassies of the home country in the host countries. 5. 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 (B) From the following actions by the Governments of the host country this risk can be managed: 1. Insistence on resident investors or labour. 2. Restriction on conversion of currency. 3. Repatriation of foreign assets of the local govt. 4. Price fixation of the products.
3. Interest Rate Risk	(A) 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 (B) Interest rate risk can be managed using following contracts: 1. Forward rate agreement (FRA) 2. Interest rate future (IRF) 3. Interest rate swap (IRS) 4. Interest rate Option/Interest rate Guarantee
4. Currency Risk [RTP-N19] [MPT-N19] [Nov-23-4M] [MTP-M-23] [MTP-N-22]	(A) Just like interest rate risk the currency risk is dependent on the Government action and economic development. Some of the parameters to identify the currency risk are as follows: (1) Government Action: The Government action of any country has visual impact in its currency. For example, the UK Govt. decision to exit from European Union i.e. Brexit brought the pound to its lowest since 1980's. (2) Nominal Interest Rate: As per interest rate parity (IRP) the currency exchange rate depends on the nominal interest of that country. (3) Inflation Rate: As per Purchasing power parity theory (PPPT), Currency exchange rate depends upon Inflation rate. (4) Natural Calamities: Any natural calamity can have negative impact.

(5) War, Coup, Rebellion etc.:

All these actions can have far reaching impact on currency's exchange rates.

(6) Change of Government:

The change of government and its attitude towards foreign investment also helps to identify the currency risk.

(B) Currency risk can be managed using following technique/contract:

- (i) Forward Contract
- (ii) Currency option
- (iii) Currency Future
- (iv) Money Market Hedge

Question: [Jan-2021-4 Marks]

Risks are inherent and integral part of the market. Discuss.

Answer:

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

Question: [MTP-Nov-2021]

Explain the term 'Cyber Risk'.

Answer:

Cyber Risk can be defined as the risk of damages due to lawsuits / compensation on account of being a victim of cyber-attack, due to which data of customers, vendors or any other counterparty can be leaked to an unauthorised, malevolent entity.

IMORTANT NOTES

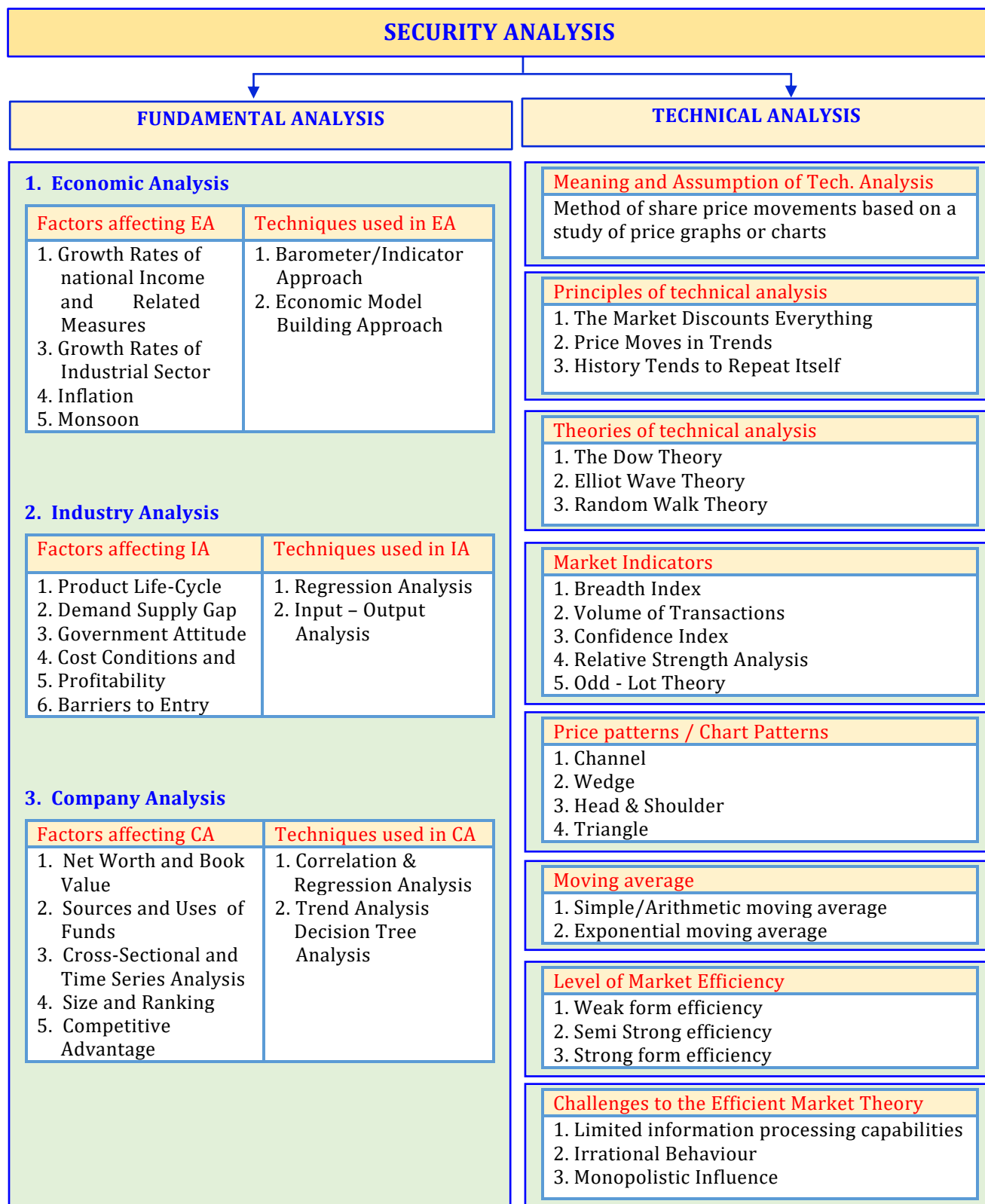
[illegible]

Chapter - 3

SECURITY ANALYSIS

Contents

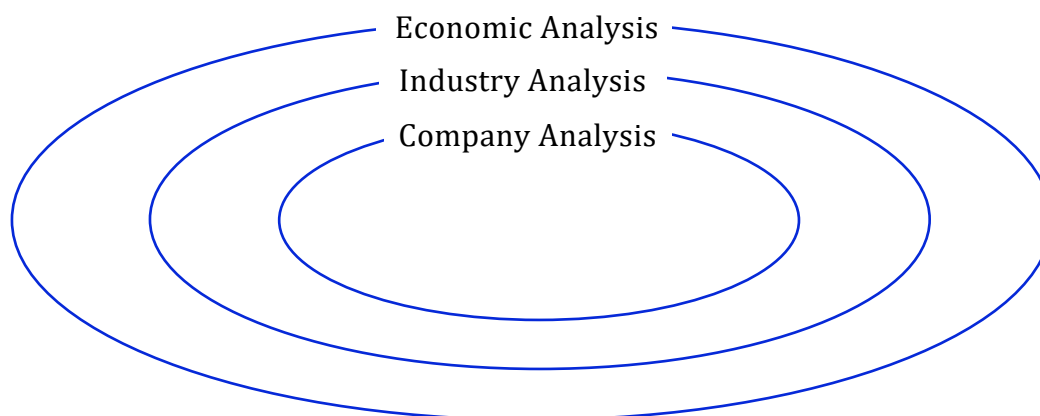
1. KEY VARIABLES OF FUNDAMENTAL ANALYSIS	3
2. ECONOMIC ANALYSIS.....	4
(A) FACTORS AFFECTING ECONOMIC ANALYSIS.....	4
(B) TECHNIQUES USED IN ECONOMIC ANALYSIS	4
3. INDUSTRY ANALYSIS.....	5
(A) FACTORS AFFECTING INDUSTRY ANALYSIS.....	5
(B) TECHNIQUES USED IN INDUSTRY ANALYSIS	6
4. COMPANY ANALYSIS	6
(A) FACTORS AFFECTING COMPANY ANALYSIS	6
(B) TECHNIQUES USED IN COMPANY ANALYSIS	8
5. MEANING & ASSUMPTIONS OF TECHNICAL ANALYSIS.....	9
6. PRINCIPLES OF TECHNICAL ANALYSIS.....	9
7. THEORIES OF TECHNICAL ANALYSIS	9
(A) THE DOW THEORY	9
(B) ELLIOT WAVE THEORY	10
(C) RANDOM WALK THEORY.....	11
8. MOVING AVERAGE.....	11
9. EVALUATION OF TECHNICAL ANALYSIS	12
10. MARKET INDICATORS.....	12
11. PRICE PATTERNS / CHART PATTERNS.....	13
12. DIFFERENCES BETWEEN FUNDAMENTAL ANALYSIS AND TECHNICAL ANALYSIS	14
13. EFFICIENT MARKET THEORY AND MISCONCEPTION	14
14. LEVEL OF MARKET EFFICIENCY	14
(A) EMPIRICAL EVIDENCE ON WEAK FORM OF EFFICIENT MARKET THEORY	15
(B) EMPIRICAL EVIDENCE ON SEMI-STRONG EFFICIENT MARKET THEORY	15
(C) EMPIRICAL EVIDENCE ON STRONG FORM OF EFFICIENT MARKET THEORY	15
15. CHALLENGES TO THE EFFICIENT MARKET THEORY	16

SUMMARY:

KEY VARIABLES OF FUNDAMENTAL ANALYSIS

Fundamental analysis is basically an examination of the economic and financial aspects of a company with the aim of estimating future earnings and dividend prospects.

Key variables of Fundamental Analysis are:



A. Economic Analysis

Factors affecting	Techniques used
1. Growth Rates of National Income and Measures 2. Growth Rates of Industrial Sector 3. Inflation 4. Monsoon	1. Barometer/Indicator Approach 2. Economic Model Building Approach

B. Industry Analysis

Factors affecting	Techniques used
1. Product Life-Cycle 2. Demand Supply Gap 3. Government Attitude 4. Cost Conditions and Profitability 5. Barriers to Entry	1. Regression Analysis 2. Input – Output Analysis

C. Company Analysis

Factors affecting	Techniques used
1. Net Worth and Book Value 2. Sources and Uses of Funds 3. Cross-Sectional and Time Series Analysis 4. Size and Ranking 5. Competitive Advantage	1. Correlation & Regression Analysis 2. Trend Analysis 3. Decision Tree Analysis

ECONOMIC ANALYSIS

Question: [RTP-Aug-2020]

Explain the factors affecting economic Analysis

Answer:

Economic analysis can be discussed in following two headings:

(A) FACTORS AFFECTING ECONOMIC ANALYSIS

(B) TECHNIQUES USED IN ECONOMIC ANALYSIS

(A) FACTORS AFFECTING ECONOMIC ANALYSIS

Some of economy wide factors are discussed as under:

(a) Growth Rates of National Income and Related Measures	It works as a pointer to the prospectus for industrial sector and helps in expected return calculation for the investor.
(b) Growth Rates of Industrial Sector	Growth rates are based on estimated demand of the products.
(c) Inflation	Inflation is measured in Wholesale & consumer Price index which determines economy.
(d) Monsoon	Both forward and backward linkage affects in market

(B) TECHNIQUES USED IN ECONOMIC ANALYSIS

Question: [SM-TYKQ]

Explain the various indicators that can be used to access the performance of an economy

Question: [MTP-Nov-2019-4M] [MTP-May-2019-5M]

Mention the various techniques used in economic Analysis.

Answer:

(a) Anticipatory Surveys	It help investors to form an opinion about the future state of the economy through expert opinion on construction activities, expenditure on plant and machinery, levels of inventory and future spending habits of consumers. Drawbacks: (i) Survey results do not guarantee that intentions surveyed would materialize. (ii) They are not regarded as forecast per se, as there can be a consensus approach by the investor for exercising his opinion.
(b) Barometer/Indicator Approach (It gives the direction of the movement but not the magnitude of the movement)	The indicators have been classified as under: (i) Leading Indicator It leads economic activity with the help of outcome generated through the time series data of the variables that reach high/low points in advance to economic activity. (ii) Roughly coincidental Indicator It reaches to their peaks and troughs at approximately the same in the economy. (iii) Lagging Indicators They are time series data of variables that lag behind in their consequences vis-a-vis the economy. They reach their turning points after the economy has reached its own already.
(c) Economic Model Building Approach (It determines relation between dependent and independent variables)	Steps used in GNP model building or sector analysis: (i) Hypothesize total economic demand by measuring total income (GNP) based on political stability, rate of inflation, changes in economic levels. (ii) Forecasting the GNP by estimating levels of various components viz. consumption expenditure, gross private domestic investment, government purchases of goods/services, net exports. (iii) After forecasting individual components of GNP, add them up to obtain the forecasted GNP. (iv) Comparison is made of total GNP thus arrived at with that from an independent agency for the forecast of GNP and then the overall forecast is tested for consistency. This is carried out for ensuring that both the total forecast and the component wise forecast fit together in a reasonable manner.

INDUSTRY ANALYSIS

Industry analysis can be discussed in following two headings:

(A) FACTORS AFFECTING INDUSTRY ANALYSIS

(B) TECHNIQUES USED IN INDUSTRY ANALYSIS

(A) FACTORS AFFECTING INDUSTRY ANALYSIS

Question: [RTP-May-2019]

DESCRIBE the factors affecting Industry Analysis.

Answer:

The following factors may particularly be kept in mind while assessing the factors relating to an industry:

(a) Product Life-Cycle	An industry usually exhibits high profitability in the initial and growth stages, medium but steady profitability in the maturity stage and a sharp decline in profitability in the last stage of growth.
(b) Demand Supply Gap	Excess supply reduces the profitability of the industry because of the decline in the unit price realization, while insufficient supply tends to improve the profitability because of higher unit price realization.
(c) Barriers to Entry	Any industry with high profitability would attract fresh investments. The potential entrants to the industry, however, face different types of barriers to entry. Some of these barriers are innate to the product and the technology of production, while other barriers are created by existing firms in the industry.
(d) Government Attitude	The attitude of the government towards an industry is a crucial determinant of its prospects
(e) State of Competition in the Industry	Factors to be noted are- firms with leadership capability and the nature of competition amongst them in foreign and domestic market, type of products manufactured viz. homogeneous or highly differentiated, demand prospects through classification viz customer-wise/area-wise, changes in demand patterns in the long/immediate/ short run, type of industry the firm is placed viz. growth, cyclical, defensive or decline.
(f) Cost Conditions and Profitability	The price of a share depends on its return, which in turn depends on profitability of the firm. Profitability depends on the state of competition in the industry, cost control measures adopted by its units and growth in demand for its products. <u>Factors to be considered are:</u> (i) Cost allocation among various heads e.g. material, labours and overheads and their controllability. (ii) Product price. (iii) Production capacity in terms of installation, idle and operating. (iv) Level of capital expenditure required for maintenance / increase in productive efficiency. Investors can make analysis of profitability through certain ratios such as G.P. Ratio, Operating Profit Margin Ratio, R.O.E. and Return on Total Capital etc.
(g) Technology and Research	It plays a vital role in the growth and survival of a particular industry. Technology is subject to change very fast leading to obsolescence. Industries which update themselves have a competitive advantage over others in terms of quality, price etc. <u>Things to be probed in this regard are:</u> (i) Nature and type of technology used. Expected changes in technology for new products leading to increase in sales. (ii) Relationship of capital expenditure and sales over time. More capital expenditure means increase in sales. (iii) Money spent in research and development. Whether this amount relates to redundancy or not? (iv) Assessment of industry in terms of sales and profitability in short, immediate and long run.

(B) TECHNIQUES USED IN INDUSTRY ANALYSIS

The techniques used for analysing the industry wide factors are:

(a) 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.
(b) 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.

COMPANY ANALYSIS

Company analysis can be discussed in following two headings:

(A) FACTORS AFFECTING COMPANY ANALYSIS

(B) TECHNIQUES USED IN COMPANY ANALYSIS

(A) FACTORS AFFECTING COMPANY ANALYSIS

Economic and industry framework provides the investor with proper background against which shares of a particular company are purchased. This requires careful examination of the company's quantitative and qualitative fundamentals.

(a) Net Worth and Book Value	⇒ Net Worth is sum of equity share capital, preference share capital and free reserves less intangible assets and any carry forward of losses. ⇒ The total net worth divided by the number of shares is the much talked about book value of a share. ⇒ Though the book value is often seen as an indication of the intrinsic worth of the share, this may not be so for two major reasons. ● First, the market price of the share reflects the future earnings potential of the firm which may have no relationship with the value of its assets. ● Second, the book value is based upon the historical costs of the assets of the firm and these may be gross underestimates of the cost of the replacement or resale values of these assets.
(b) Sources and Uses of Funds	⇒ The identification of sources and uses of funds is known as Funds Flow Analysis. One of the major uses of funds flow analysis is to find out whether the firm has used short-term sources of funds to finance long-term investments. ⇒ Such methods of financing increases the risk of liquidity crunch for the firm, as long-term investments, because of the gestation period involved may not generate enough surpluses in time to meet the short-term liabilities incurred by the firm. Many a firm has come to grief because of this mismatch between the maturity periods of sources and uses of funds.
(c) Cross-Sectional and Time Series Analysis	One of the main purposes of examining financial statements is to compare two firms, compare a firm against some benchmark figures for its industry and to analyse the performance of a firm over time. The techniques that are used to do such proper comparative analysis are: common-sized statement, and financial ratio analysis.
(d) Size and Ranking	⇒ A rough idea regarding the size and ranking of the company within the economy, in general, and the industry, in particular, would help the investment manager in assessing the risk associated with the company. ⇒ In this regard the net capital employed, the net profits, the return on investment and the sales figures of the company under consideration may be compared with similar data of other companies in the same industry group. ⇒ It may also be useful to assess the position of the company in terms of technical know-how, research and development activity and price leadership.

(e) Growth Record	⇒ The growth in sales, net income, net capital employed and earnings per share of the company in the past few years should be examined. The following three growth indicators may be particularly looked into: (a) Price earnings ratio (b) Percentage growth rate of earnings per annum (c) Percentage growth rate of net block. ⇒ Growth is the single most important factor in company analysis for the of investment management. A company may have a good record of profits and performance in the past; but if it does not have growth potential, its shares cannot be rated high from the investment point of view.
(f) Financial Analysis	● An analysis of its financial statements dictates investment manager in understanding the financial solvency and liquidity, optimum capital structure, profitability, the operating efficiency, and the financial and operating leverages of the company. ● For this fundamental ratio have to be calculated and appropriate comparison is made to industrial ratios or similar group companies. i.e, earnings per share, price earnings ratios, yield, book value and the intrinsic value of the share. ● Various other ratios to measure profitability, operating efficiency and turnover efficiency of the company may also be calculated. The return on owners' investment, capital turnover ratio and the cost structure ratios may also be worked out. ● To examine the financial solvency or liquidity of the company, the investment manager may work out current ratio, liquidity ratio, debt-equity ratio, etc. These ratios will provide an overall view of the company to the investment analyst. He can analyse its strengths and weaknesses and see whether it is worth the risk or not.
(g) Competitive Advantage	Another business consideration for investors is competitive advantage. A company's long-term success is driven largely by its ability to maintain its competitive advantage. Powerful competitive advantages, such as Apple's brand name and Samsung's domination of the mobile market, create a shield around a business that allows it to keep competitors at a distance.
(h) Quality of Management	This is an intangible factor while the investment manager make decision in relevance to the effectiveness, efficiency, and performance of management. The policy of the management regarding relationship with the stakeholders which includes meeting top executives of the company as possible and also an important factor since certain business houses believe in very generous dividend and bonus distributions while others are rather conservative. Meanwhile, for finding the dirt inside the management. The remedy is: ⇒ To have a look out for the conference calls hosted by the company's CEO and CFO where one can pick something that can indicate about the true position about the company. ⇒ To read the Management Discussion and Analysis Report. ⇒ To see the past performance of the executives, say, for five years.
(i) Corporate Governance	Following factors are to be kept in mind while judging the effectiveness of corporate governance of an organization: ⇒ Whether company is complying with all aspects of clause 49. ⇒ How well corporate governance policies serve stakeholders? ⇒ Quality and timeliness of company financial disclosures. ⇒ Whether quality independent directors are inducted.
(j) Regulation	Regulations plays an important role in maintaining the sanctity of the corporate form of organization. ⇒ In Indian listed companies, Companies Act, Securities Contract and Regulation Act and SEBI Act basically look after regulatory aspects of a company. ⇒ A listed company is also continuously monitored by SEBI which through its guidelines and regulations protect the interest of investors.

	⇒ Further, a company which is dealing with companies outside India, needs to comply with Foreign Exchange Management Act (FEMA) also. In this scenario, the Reserve Bank of India (RBI) does a continuous monitoring.
(k) Location and Labour-Management Relations:	The locations of the company's manufacturing facilities determine its economic viability which depends on the availability of crucial inputs like power, skilled labour and raw-materials, etc. Nearness to markets is also a factor to be considered. In the past few years, the investment manager has begun looking into the state of labour- management relations in the company under consideration and the area where it is located.
(l) Pattern of Existing Stock Holding	An analysis of the pattern of existing stock holdings of the company would also be relevant. This would show the stake of various parties in the company. An interesting case in this regard is that of the Punjab National Bank in which the Life Insurance Corporation and other financial institutions had substantial holdings. When the bank was nationalised, the residual company proposed a scheme whereby those shareholders, who wish to opt out, could receive a certain amount as compensation in cash. It was only at the instance and the bargaining strength, of institutional investors that the compensation offered to the shareholders, who wished to opt out of the company, was raised considerably.
(m) Marketability of the Shares	Another important consideration for an investment manager is the marketability of the shares of the company. Mere listing of a share on the stock exchange does not automatically mean that the share can be sold or purchased at will. There are many shares which remain inactive for long periods with no transactions being effected. To purchase or sell such scrips is a difficult task. In this regard, dispersal of shareholding with special reference to the extent of public holding should be seen. The other relevant factors are the speculative interest in the particular scrip, the particular stock exchange where it is traded and the volume of trading

(B) TECHNIQUES USED IN COMPANY ANALYSIS

Through the use of statistical techniques, the company wide factors can be analysed. Some of the techniques are discussed as under:

(a) Correlation & Regression Analysis	Simple regression is used when inter relationship covers two variables. For more than two variables, multiple regression analysis is followed. Here the inter relationship between variables belonging to economy, industry and company are found out. The main advantage in such analysis is the determination of the forecasted values along with testing the reliability of the estimates.
(b) 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.
(c) Decision Tree Analysis	A range of values of the variable with probabilities of occurrence of each forecasted value is taken up. The limitations are reduced through decision tree analysis and use of simulation techniques. In decision tree analysis, the probabilities of each sequence is to be multiplied and then summed up.

MEANING & ASSUMPTIONS OF TECHNICAL ANALYSIS

Technical Analysis is a method of share price movements based on a study of price graphs or charts on the assumption that share price trends are repetitive, that since investor psychology follows a certain pattern, what is seen to have happened before is likely to be repeated

Assumptions of Technical Analysis:

- (i) The market value of stock is actually depending on the supply and demand for a stock.
- (ii) The supply and demand is actually governed by several factors.
- (iii) Stock prices generally move in trends which continue for a substantial period of time. Therefore, if there is a bull market going on, there is every possibility that there will soon be a substantial correction which will provide an opportunity to the investors to buy shares at that time.
- (iv) Technical analysis relies upon chart analysis which shows the past trends in stock prices rather than the information in the financial statements like balance sheet or profit and loss account.

PRINCIPLES OF TECHNICAL ANALYSIS

Question: [Dec-2021-4M]

Describe briefly on which principles Technical Analysis is based.

Answer:

Technical analysis is based on the following three principals:

(a) The Market Discounts Everything	Many experts criticize technical analysis because it only considers price movements and ignores fundamental factors. The argument against such criticism is based on the Efficient Market Hypothesis, which states that a company's share price already reflects everything that has or could affect a company. And it includes fundamental factors. So, technical analysts generally have the view that a company's share price includes everything including the fundamentals of a company.
(b) Price Moves in Trends	Technical analysts believe that prices move in trends. In other words, a stock price is more likely to continue a past trend than move in a different direction.
(c) History Tends to Repeat Itself	Technical analysts believe that history tends to repeat itself. Technical analysis uses chart patterns to analyze subsequent market movements to understand trends. While many form of technical analysis have been used for many years, they are still are considered to be significant because they illustrate patterns in price movements that often repeat themselves.

THEORIES OF TECHNICAL ANALYSIS

Question: [SM-TYKQ] [MTP-May-2018-New-6M] [MTP-Nov-2022]

Explain Dow Jones theory.

Answer:

(A) THE DOW THEORY

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

● The Dow Theory is based upon the movements of two indices:

- (i) Dow Jones Industrial Average (DJIA)
- (ii) Dow Jones Transportation Average (DJTA)

- The movements of the market are divided into three classifications, all going at the same time; the primary movement, the secondary movement, and the daily fluctuations.
- The primary movement-which lasts from one year to 36 months or longer. The secondary movement of the market is opposite in direction to primary. It lasts from two weeks to a month or more. The daily fluctuations are the narrow movements from day-to-day depending on primary and secondary in long run.

- It states that if the cyclical swings of the stock market averages are successively higher and the successive lows are higher, then the market trend is up and a bullish market exists. Contrarily, if the successive highs and successive lows are lower, then the direction of the market is down and a bearish market exists.
- Dow proposed that the primary uptrend would have three moves up, the first one being caused by accumulation of shares by the far-sighted, knowledgeable investors, the second move would be caused by the arrival of the first reports of good earnings by corporations, and the last move up would be caused by up would be caused by widespread report of financial well-being of corporations.

(B) ELLIOT WAVE THEORY

Ralph Elliot formulated Elliot Wave Theory in 1934. From his studies of 75 years, he defined price movements in terms of waves.

- As per the theory, a movement of the market price from one change in the direction to the next change in the same direction. These waves are resulted from buying and selling impulses emerging from the demand and supply pressures on the market.
- Waves can be classified into two parts :-
 - (i) Impulsive Patterns
 - (ii) Corrective Patterns

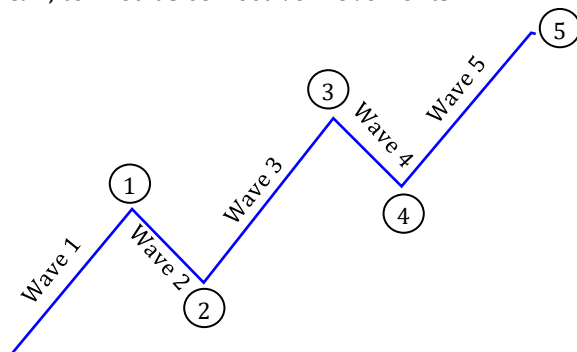
(I) IMPULSIVE PATTERNS - (BASIC WAVES):

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

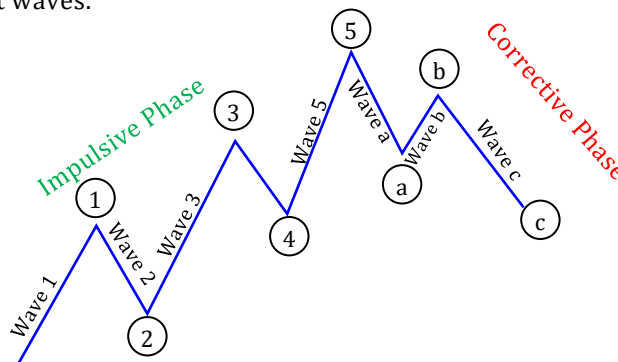
(II) CORRECTIVE PATTERNS (REACTION WAVES)

These 3 waves are against the basic direction of the basic movement. Correction involves correcting the earlier rise in case of bull market and fall in case of bear market.

As shown in the following diagram waves 1, 3 and 5 are directional movements, which are separated or corrected by wave 2 & 4, termed as corrective movements.



Complete cycle: As shown in following figure five-wave impulses is following by a three wave correction (a, b & c) to form a complete cycle of eight waves.



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

(C) RANDOM WALK THEORY

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

This hypothesis is known as Random Walk hypothesis which states that the behaviour of stock market prices is unpredictable and that there is no relationship between the present prices of the shares and their future prices.

- Proponents of this hypothesis argue that stock market prices are independent. A British statistician, found that changes in security prices behave nearly as if they are generated by a suitably designed roulette wheel for which each outcome is statistically independent of the past history.
- The fact that there are peaks and troughs in stock exchange prices is a mere statistical happening - successive peaks and troughs are unconnected.
- In the layman's language it may be said that prices on the stock exchange behave exactly the way a drunk would behave while walking in a blind lane.

The supporters of this theory put out a simple argument. It follows that:

- (a) Prices of shares in stock market can never be predicted.
- (b) 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.
- (c) There may be periodical ups or downs in share prices, but no connection can be established between two successive peaks (high price of stocks) and troughs (low price of stocks).

MOVING AVERAGE

Moving Averages is one of the more popular methods of data analysis for decision making. The two types of moving averages used by chartists are:

(i) Arithmetic Moving Average (AMA)/Simple moving average (SMA)

(ii) Exponential moving Average (EMA)

(I) ARITHMETIC MOVING AVERAGE(AMA):-

AMA is a simple average of the last n period prices.

$$\text{For example, } 10 \text{ days AMA} = \frac{\text{Sum of last 10 days price}}{10}$$

$$30 \text{ days AMA} = \frac{\text{Sum of last 30 days price}}{30}$$

(II) EXPONENTIAL MOVING AVERAGE(EMA):-

EMA is a weighted average of last n period prices. It is calculated using following formula:

Current day EMA = Previous day EMA + (Closing price-Previous day EMA) × Exponent

$$\text{Where, Exponent} = \frac{2}{\text{Number of period in a moving average} + 1}$$

Trend identification using moving average:

(i) **Long term trend:** A 200 day's moving average of daily prices or a 30 week moving average of weekly price for identifying a long term trend.

(ii) **Medium term trend:** A 60 day's moving average of daily price to identify an intermediate term trend.

(iii) **Short 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 flatter out.	(a). Stock price line falls through moving average line when graph of the moving average line is flatter 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.

EVALUATION OF TECHNICAL ANALYSIS

Question: [MPT-May-2019-4M]

Describe the concept of evaluation of technical analysis.

Question: [Nov-2020-4M] [Nov-2023-4M]

In an efficient market, technical analysis may not work perfectly. However, with imperfections, inefficiencies and irrationalities, which characteristics the real world, technical analysis may be helpful.

Critically analyse the statement.

Answer:

Arguments for technical analysis:

Technical Analysis has several supporters as well several critics. The advocates of technical analysis offer the following interrelated argument in their favour:

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

Arguments against technical analysis:

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

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

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

MARKET INDICATORS

Question: [RTP-Nov-2020] [MTP-Nov-2020]

Explain various "Market Indicators".

Answer:

Breadth Index	- It is an index that covers all securities traded. The breadth index is an addition to the Dow Theory and the movement of the Dow Jones Averages. - It is computed by dividing the net advances or declines in the market by the number of issues traded. - The breadth index either supports or contradicts the movement of the Dow Jones Averages. - If it supports the movement of the Dow Jones Averages, this is considered sign of technical strength and if it does not support the averages, it is a sign of technical weakness i.e. a sign that the market will move in a direction opposite to the Dow Jones Averages.
----------------------	--

Volume of Transactions	- The volume of shares traded in the market provides useful clues on how the market would behave in the near future. - A rising index/price with increasing volume would signal buy behaviour because the situation reflects an unsatisfied demand in the market. Similarly, a falling market with increasing volume signals a bear market and the prices would be expected to fall further. - A rising market with decreasing volume indicates a bull market while a falling market with dwindling volume indicates a bear market. Thus, the volume concept is best used with another market indicator, such as the Dow Theory.
Confidence Index	- It is supposed to reveal how willing the investors are to take a chance in the market. It is the ratio of high-grade bond yields to low-grade bond yields. - It is used by market analysts as a method of trading or timing the purchase and sale of stock, and also, as a forecasting device to determine the turning points of the market. - A rising confidence index is expected to precede a rising stock market, and a fall in the index is expected to precede a drop in stock 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. The confidence index is usually, but not always a leading indicator of the market. Therefore, it should be used in conjunction with other market indicators.
Relative Strength Analysis	- The relative strength concept suggests that the prices of some securities rise relatively faster in a bull market or decline more slowly in a bear market than other securities i.e. some securities exhibit relative strength. - Investors will earn higher returns by investing in securities which have demonstrated relative strength in the past because the relative strength of a security tends to remain undiminished over time. Relative strength can be measured in several ways. - Calculating rates of return and classifying those securities with historically high average returns as securities with high relative strength is one of them. - 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	This theory is a contrary - opinion theory. It assumes that the average person is usually wrong and that a wise course of action is to pursue strategies contrary to popular opinion. The odd-lot theory is used primarily to predict tops in bull markets, but also to predict reversals in individual securities.

PRICE PATTERNS / CHART PATTERNS

There are numerous price patterns documented by technical analysts but only a few and important of them have been discussed here:

- (i) Channel
- (ii) Wedge
- (iii) Head and Shoulders
- (iv) Triangle
- (v) Flags and Pennants
- (vi) Double Top form
- (vii) Double bottom form

Refer class notes for detail

DIFFERENCES BETWEEN FUNDAMENTAL ANALYSIS AND TECHNICAL ANALYSIS

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

EFFICIENT MARKET THEORY AND MISCONCEPTION

Question: [SM- TYKQ]

Explain the Efficient Market Theory in and what are major misconceptions about this theory?

Answer:

Efficient Market Theory was developed by University of Chicago professor Eugen Fama in the 1960s. As per this theory, for a given time, all available price sensitive information is fully reflected in securities' prices. Thus this theory implies that no investor can consistently outperform the market as every stock is appropriately priced based on available information. Stating otherwise theory states that 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.

Misconception about the efficient market theory:

- ⊙ Efficient Market Theory implies that market prices factor in all available information and as such it is not possible for any investor to earn consistent long term returns from market operations.
- ⊙ Although price tends to fluctuate they cannot reflect fair value. This is because the future is uncertain. The market springs surprises continually and as prices reflect the surprises they fluctuate.
- ⊙ Inability of institutional portfolio managers to achieve superior investment performance implies that they lack competence in an efficient market. It is not possible to achieve superior investment performance since market efficiency exists due to portfolio managers doing this job well in a competitive setting.
- ⊙ The random movement of stock prices suggests that stock market is irrational. Randomness and irrationality are two different things, if investors are rational and competitive, price changes are bound to be random.

LEVEL OF MARKET EFFICIENCY

That price reflects all available information, the highest order of market efficiency. According to FAMA, there exist three levels of market efficiency :-

(A) WEAK FORM EFFICIENCY	Price reflect all information found in the record of past prices and volumes.
(B) 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.
(C) STRONG FORM EFFICIENCY	Price reflect all available information public as well as private.

(A) EMPIRICAL EVIDENCE ON WEAK FORM OF EFFICIENT MARKET THEORY

According to the Weak form Efficient Market Theory current price of a stock reflect all information found in the record of past prices and volumes. This means that there is no relationship between the past and future price movements.

Test to verify the weak form of Efficient Market are:-

1. Serial Correlation Test	To test for randomness in stock price changes, one has to look at serial correlation. For this purpose, price change in one period has to be correlated with price change in some other period. Price changes are considered to be serially independent. Serial correlation studies employing different stocks, different time lags and different time period have been conducted to detect serial correlation but no significant serial correlation could be discovered. These studies were carried on short term trends viz. daily, weekly, fortnightly and monthly and not in long term trends in stock prices as in such cases. Stock prices tend to move upwards.
2. Run Test	Given a series of stock price changes each price change is designated + if it represents an increase and – if it represents a decrease. The resulting series may be -, +, -, -, -, +, +. A run occurs when there is no difference between the sign of two changes. When the sign of change differs, the run ends and new run begins.
3. Filter Rules Test	If the price of stock increases by at least N% buy and hold it until its price decreases by at least N% from a subsequent high. When the price decreases at least N% or more, sell it. If the behaviour of stock price changes is random, filter rules should not apply in such a buy and hold strategy. By and large, studies suggest that filter rules do not outperform a single buy and hold strategy particular after considering commission on transaction.

(B) EMPIRICAL EVIDENCE ON SEMI-STRONG EFFICIENT MARKET THEORY

Semi-strong form efficient market theory holds that stock prices adjust rapidly to all publicly available information.

- By using publicly available information, investors will not be able to earn above normal rates of return after considering the risk factor.
- Follower of this theory, Fama, Fisher, Jensen and Roll in their adjustment of stock prices to new information examined the effect of stock split on return in New York Stock Exchange. They found that prior to the split, stock earns higher returns than predicted by any market model.

Boll and Brown in an empirical evaluation of accounting income numbers studied the effect of annual earnings announcements. They divided the firms into two groups.-

- First group consisted of firms whose earnings increased in relation to the average corporate earnings and earned positive abnormal returns after the announcement of earnings.
- Second group consists of firms whose earnings decreased in relation to the average corporate earnings and earned negative abnormal returns after the announcement of earnings.

Inefficiencies and anomalies from studies: -

- 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.

(C) EMPIRICAL EVIDENCE ON STRONG FORM OF EFFICIENT MARKET THEORY

According to the Efficient Market Theory, all available information, public or private, is reflected in the stock prices. This represents an extreme hypothesis.

To test this theory, the researcher analysed returns earned by certain groups viz. corporate insiders, specialists on stock exchanges, mutual fund managers who have access to internal information (not publicly available), or

possess greater resource or ability to intensively analyse information in the public domain. They suggested that corporate insiders (having access to internal information) and stock exchange specialists (having monopolistic exposure) earn superior rate of return after adjustment of risk.

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.

CHALLENGES TO THE EFFICIENT MARKET THEORY

Questions: [RTP-NOV 2018] [MTP-May-2020]

Explain the challenges to efficient market theory.

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.

(a) Limited information processing capabilities	Human information processing capabilities are sharply limited. According to Herbert Simon every human organism lives in an environment which generates millions of new bits of information every second but the bottle necks of the perceptual apparatus does not admit more than thousand bits per seconds and possibly much less. David Dreman maintained that under conditions of anxiety and uncertainty, with a vast interacting information grid, the market can become a giant.
(b) Irrational Behaviour	It is generally believed that investors' rationality will ensure a close correspondence between market prices and intrinsic values. But in practice this is not true. J. M. Keynes argued that all sorts of consideration enter into the market valuation which is in no way relevant to the prospective yield. This was confirmed by L. C. Gupta who found that the market evaluation processes work haphazardly almost like a blind man firing a gun. 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.
(c) Monopolistic Influence -	A market is regarded as highly competitive. No single buyer or seller is supposed to have undue influence over prices. In practice, powerful institutions and big operators wield grate influence over the market. The monopolistic power enjoyed by them diminishes the competitiveness of the market.

Chapter - 4

SECURITY VALUATION

Contents

Question - 1 [June-2009-Old-3M] [TYKQ-SM-New].....	2
Why should the duration of a coupon carrying bond always be less than the time to its maturity?	2
Question 2 [May-2012-Old-4M] [TYKQ-SM-New].....	2
Write short note on “Zero Coupon Bond”.....	2
Question 3	2
Write short note on “Enterprise Valuation”.	2
Question 4 [RTP-Nov-2019].....	3
Explain the reasons of Reverse Stock Split.	3
Question-5 [MTP-Nov-2021].....	4
Are Sustainable Growth Rate and Internal Growth Rate being same concepts? Explain.	4
Question-6 [MTP-May-2021]	4
Modified Duration is a proxy not an accurate measure of change in price of a Bond due to change interest rate. Discuss.....	4
Question-7	5
What are the role of Valuers?.....	5
Question-8.....	5
What are the responsibilities of Valuers in terms of: -.....	5
Question-9.....	7
What are the precautions need to be taken by a valuer before accepting any valuation assignment?	7

Question - 1 [June-2009-Old-3M] [TYKQ-SM-New]

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, the investment will offer him the duration which would be lesser than the maturity of the instrument. Higher the coupon rate, lesser would be the duration.

Question 2 [May-2012-Old-4M] [TYKQ-SM-New]

Write short note on "Zero Coupon Bond".

Answer:

As name indicates these bonds do not pay interest during the life of the bonds. Instead, zero coupon bonds are issued at discounted price to their face value, which is the amount a bond will be worth when it matures or comes due.

When a zero coupon bond matures, the investor will receive one lump sum (face value) equal to the initial investment plus interest that has been accrued on the investment made.

The maturity dates on zero coupon bonds are usually long term. These maturity dates allow an investor for a long range planning. Zero coupon bonds issued by banks, government and private sector companies.

However, bonds issued by corporate sector carry a potentially higher degree of risk, depending on the financial strength of the issuer and longer maturity period, but they also provide an opportunity to achieve a higher return.

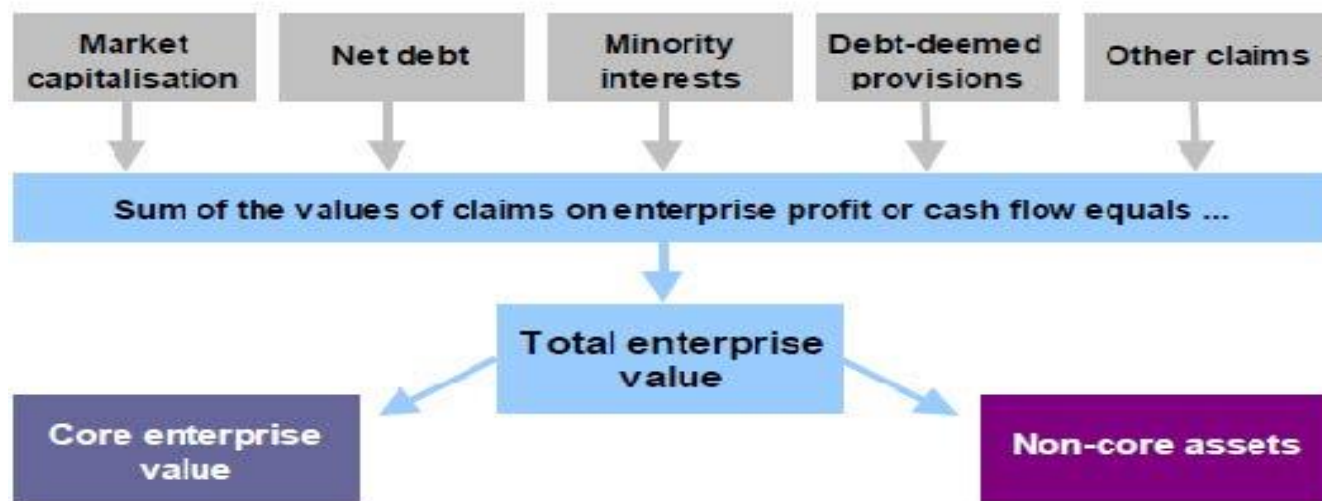
Question 3

Write short note on "Enterprise Valuation".

Answer:

Enterprise Valuation:

Enterprise value is the true economic value of a company calculated by adding market capitalization, Long term Debt, Minority Interest minus cash and cash equivalents & Equity investments like affiliates, investment in any company and also Long term investments.



Enterprise value is of three types:

(i) Total Enterprise Value:

Total enterprise value is the value of all the business activities; it is the summation of market capitalization, Debt (Interest Bearing), Minority Interest “minus” cash.

(ii) Operating Enterprise Value:

The operating Enterprise value is the value of all operating activities, and to get this we have to deduct “market value of non- operating assets” which includes Investments and shares (in associates) from the total enterprise value.

(iii) Core Enterprise Value:

Core enterprise value is the value which does not include the value of operations (which are not the part of activities which activities). To get this we deduct the value of non-core assets from the operating enterprise value.

There are different enterprise value multiples which can be calculated as per the requirement (which requirement). If we take the EV as numerator then the denominator must represent the claims of all the claimholders on enterprise cash flow.

(i) Enterprise Value to Sales:

This multiple is suitable for the corporates who maintain negative cash flows or negative earnings as cyclical firms. Corporate like technological firms generally use this multiple.

(ii) Enterprise Value to EBITDA:

EBITDA, which is commonly known as the proxy of cash flow, is the amount available to debt and equity holders of a company. This multiple is used for valuing capital intensive companies, which generally have substantial depreciation and amortization expenses. This multiple is used for acquisitions as it incorporates debts as well equity of the business. An analyst prefers this multiple because it is not affected by depreciation policy and changes in capital structure. The inverse of this multiple explains cash return on total investment.

Question 4 [RTP-Nov-2019]

Explain the reasons of Reverse Stock Split.

Question [MTP-May-2019-5M]

What is reverse stock split up and why companies resort it.

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. For example, in a 5 : 1 reverse split, a company would take back 5 shares and will replace them with one share.

Although, reverse stock split does not result in change in Market value or Market Capitalization of the company but it results in increase in price per share.

Considering above mentioned ratio, if company has 100 million shares outstanding having Market Capitalisation of Rs. 500 crore before split up, the number of shares would be equal to 20 million after the reverse split up and market price per share shall increase from Rs. 50 to Rs. 250.

Reasons for Reverse Split Up

Although Reverse Split up is not so popular especially in India but company carries out reverse split up due to following reasons:

(i) 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.

(ii) 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.

(iii) To avoid the tag of "Penny Stock":

If the price of shares of a company goes below a limit it may be called "Penny Stock". In order to improve the image of the company and avoiding this stage, the company may go for Reverse Stock Split.

(iv) 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-5 [MTP-Nov-2021]

Are Sustainable Growth Rate and Internal Growth Rate being same concepts? Explain.

Answer:

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

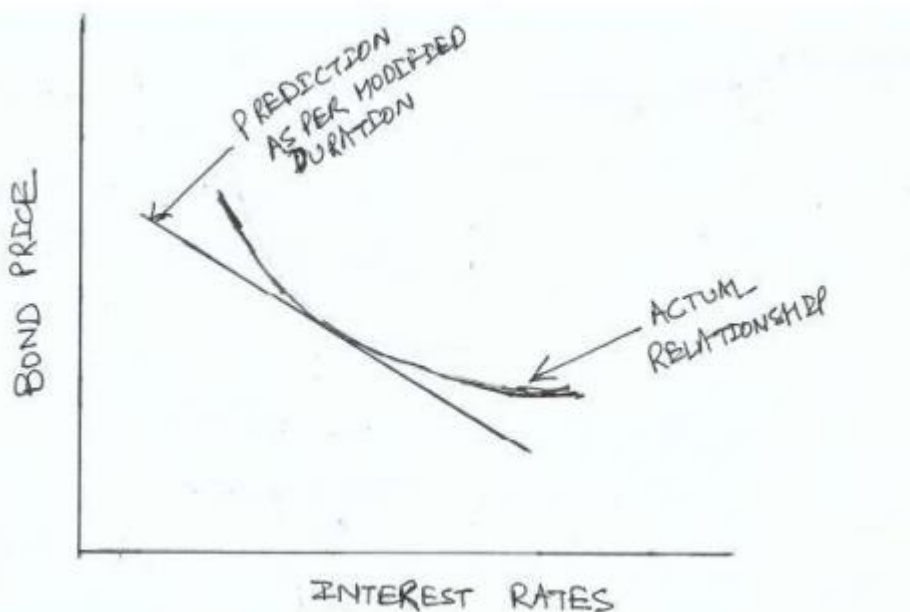
Question-6 [MTP-May-2021]

Modified Duration is a proxy not an accurate measure of change in price of a Bond due to change interest rate. Discuss.

Answer:

Although Modified Duration is a measure of volatility or change in the price of a Bond consequent upon change in the yield or interest rates as it assumes a linear relationship between the Modified Duration and the price of a Bond but is not accurate measure because of Convexity.

Accordingly, the relationship between change in the interest rate and bond value is non-linear i.e. convex curve to the origin as shown below:



From the above diagram it is clear that the actual effect of change in interest rate on Bond Price is different from the predicted linear relationship.

Question-7

What are the role of Valuers?

Answer:

The role of Valuers has increased a lot due to increased statutory and information requirements.

The valuations made by a Valuers are required statutorily for the following purposes: -

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

Question-8

What are the responsibilities of Valuers in terms of: -

- (a) Integrity and Fairness*
- (b) Professional Competence and Due Care*
- (c) Independence and Disclosure of Interest*
- (d) Confidentiality*
- (e) Information Management*
- (f) Gifts and hospitality*
- (g) Remuneration and Costs*
- (h) Occupation, employability and restrictions*

Answer:

Under Rule 12(e) of the Companies (Registered Valuers and Valuation) Rules, 2017 the Model Code of Conduct for Registered Valuers is as follows:

Integrity and Fairness

1. A valuer should in the conduct of his/its business follow high standards of integrity and fairness in all his/its dealings with his/its clients and other valuers.
2. A valuer should maintain integrity by being honest, straightforward, and forthright in all professional relationships.
3. A valuer should endeavour to ensure that he/it provides true and adequate information and shall not misrepresent any facts or situations.
4. A valuer should refrain from being involved in any action that would bring disrepute to the profession.

Professional Competence and Due Care

5. A valuer should render at all times high standards of service, exercise, due diligence, ensure proper care and exercise independent professional judgment.
6. A valuer should carry out professional services in accordance with the relevant technical and professional standards that may be specified from time to time
7. A valuer should continuously maintain professional knowledge and skill to provide competent professional service based on up-to-date developments in practice, prevailing regulations/guidelines and techniques.
8. In the preparation of a valuation report, the valuer should not disclaim liability for his/its expertise or deny his/its duty of care, except to the extent that the assumptions are statements of fact provided by the company and not generated by the valuer.

9. A valuer should have a duty to carry out with care and skill, the instructions of the client insofar as they are compatible with the requirements of integrity, objectivity and independence.

Independence and Disclosure of Interest

10. A valuer should act with objectivity in his/its professional dealings by ensuring that his/its decisions are made without the presence of any bias, conflict of interest, coercion, or undue influence of any party, whether directly connected to the valuation assignment or not.
11. A valuer should not take up an assignment under the Act/Rules if he/it or any of his/its relatives or associates is not independent in relation to the company and assets being valued.
12. A valuer should maintain complete independence in his/its professional relationships and shall conduct the valuation independent of external influences.
13. A valuer should wherever necessary disclose to the clients, possible sources of conflicts of duties and interests, while providing unbiased services.
14. A valuer should not deal in securities of any subject company after any time when he/it first becomes aware of the possibility of his/its association with the valuation, and in accordance with the SEBI (Prohibition of Insider Trading) Regulations, 2015.
15. A valuer should not indulge in “mandate snatching” or “convenience valuations” in order to cater to the company’s needs or client needs. A valuer should communicate in writing with a prior valuer if there is knowledge of any prior valuer having been appointed before accepting the assignment.
16. As an independent valuer, the valuer should not charge success fee.
17. In any fairness opinion or independent expert opinion submitted by a valuer, if there has been a prior engagement in an unconnected transaction, the valuer should declare the past association with the company.

Confidentiality

18. A valuer should not use or divulge to other clients or any other party any confidential information about the subject company, which has come to his/its knowledge without proper and specific authority or unless there is a legal or professional right or duty to disclose.

Information Management

19. A valuer should ensure that he/ it maintains written contemporaneous records for any decision taken, the reasons for taking the decision, and the information and evidence in support of such decision. This should be maintained so as to sufficiently enable a reasonable person to take a view on the appropriateness of his/its decisions and actions.
20. A valuer should appear, co-operate and be available for inspections and investigations carried out by the Registration Authority, any person authorised by the Registration Authority, the Valuation Professional Organisation with which he/it is registered or any other statutory regulatory body.
21. A valuer should provide all information and records as may be required by the Registration Authority, the Tribunal, Appellate Tribunal, the Valuation Professional Organisation with which he/it is registered, or any other statutory regulatory body.
22. A valuer while respecting the confidentiality of information acquired during the course of performing professional services, should maintain proper working papers for a period of three years, for production before a regulatory authority or for a peer review. In the event of a pending case before the Tribunal or Appellate Tribunal, the record should be maintained till the disposal of the case.

Gifts and hospitality

23. A valuer, or his/its relative should not accept gifts or hospitality which undermines or affects his independence as a valuer.
24. A valuer should not offer gifts or hospitality or a financial or any other advantage to a public servant or any other person, intending to obtain or retain work for himself/ itself, or to obtain or retain an advantage in the conduct of profession for himself/ itself.

Remuneration and Costs

25. A valuer should provide services for remuneration which is charged in a transparent manner, is a reasonable reflection of the work necessarily and properly undertaken and is not inconsistent with the applicable rules.
26. A valuer should not accept any fees or charges other than those which are disclosed to and approved by the persons fixing his/ its remuneration.

Occupation, employability and restrictions

27. A valuer should refrain from accepting too many assignments, if he/it is unlikely to be able to devote adequate time to each of his/ its assignments.
28. A valuer should not engage in any employment, except when he has temporarily surrendered his certificate of membership with the Valuation professional Organisation with which he is registered.
29. A valuer should not conduct business which in the opinion of the Registration Authority is inconsistent with the reputation of the profession.

Question-9

What are the precautions need to be taken by a valuer before accepting any valuation assignment?

Answer:

It should be evidently clear to the valuation professional as well as to the end consumer that a good valuation is much more than just numbers. While it is critical to get the maths and application right however it is equally important to have a comprehensive understanding of the narrative behind the valuation. Attention should be given to the following points while making a valuation:

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

Important Notes:

[illegible]

Chapter - 5

PORTFOLIO MANAGEMENT

Contents

Question-1 [May-2004-Old-(3+7) M].....	2
(a) What sort of investor normally views the variance (or Standard Deviation) of an individual security's return as the security's proper measure of risk?	2
(b) What sort of investor rationally views the beta of a security as the security's proper measure of risk? In answering the question, explain the concept of beta.....	2
Question-2 [Nov-2004-Old-4M].....	2
Distinguish between 'Systematic risk' and 'Unsystematic risk'.	2
Question-3 [May-2006-Old-6M]	3
Briefly explain the objectives of "Portfolio Management".	3
Question-4 [Nov-2006-Old-6M] [MTP-May-2023]	3
Discuss the various kinds of Systematic and Unsystematic risk?	3
Question-5 [Nov-2009-Old-6M] [Nov-2008-Old-5M] [May-2006-Old-3M]	4
Discuss the Capital Asset Pricing Model (CAPM) and its relevant assumptions. Or Write a short note on assumptions of CAPM.	4
Question-6 [Nov-2008-Old-5M].....	5
Explain briefly the capital Asset pricing model used in the context of valuation of securities.	5
Question-7 [May-2011-Old-4M]	5
Discuss how the risk associated with securities is effected by Government policy.	5
Question-8 [Dec-2021-4M]	5
Buy and hold is one of the policies of portfolio rebalancing. Briefly explain other policies of portfolio rebalancing.	5
Question-9 [MTP-Nov-2023].....	6
Explain the key features of Alternative Investments that make them different from other investment avenues.	6
Question-10 [MTP-Nov-2023]	6
Explain the advantages and Limitation of Capital Asset Pricing Model (CAPM).	6
Question-11 [MTP-Nov-2022] [MTP-Nov-2020]	6
EXPLAIN various Asset Allocation Strategies.	6
Question-12 [MTP-May-2021].....	7
Explain the strategy of Portfolio rebalancing under which the value of a portfolio shall not below a specified value in normal market conditions.....	7

Question-1 [May-2004-Old-(3+7) M]

- (a) What sort of investor normally views the variance (or Standard Deviation) of an individual security's return as the security's proper measure of risk?
- (b) What sort of investor rationally views the beta of a security as the security's proper measure of risk? In answering the question, explain the concept of beta.

Answer:

- (a) A rational risk-averse investor views the variance (or standard deviation) of her portfolio's return as the proper risk of her portfolio. If for some reason or another the investor can hold only one security, the variance of that security's return becomes the variance of the portfolio's return. Hence, the variance of the security's return is the security's proper measure of risk.

While risk is broken into diversifiable and non-diversifiable segments, the market generally does not reward for diversifiable risk since the investor himself is expected to diversify the risk himself. However, if the investor does not diversify, he cannot be considered to be an efficient investor. The market, therefore, rewards an investor only for the non-diversifiable risk. Hence, the investor needs to know how much non-diversifiable risk he is taking. This is measured in terms of beta.

An investor therefore, views the beta of a security as a proper measure of risk, in evaluating how much the market reward him for the non-diversifiable risk that he is assuming in relation to a security. An investor who is evaluating the non-diversifiable element of risk, that is, extent of deviation of returns viz-a-viz the market therefore considers beta as a proper measure of risk.

- (b) If an individual holds a diversified portfolio, she still views the variance (or standard deviation) of her portfolio's return as the proper measure of the risk of her portfolio. However, she is no longer interested in the variance of each individual security's return. Rather she is interested in the contribution of each individual security to the variance of the portfolio.

Under the assumption of homogeneous expectations, all individuals hold the market portfolio. Thus, we measure risk as the contribution of an individual security to the variance of the market portfolio. The contribution when standardized properly is the beta of the security. While a very few investors hold the market portfolio exactly, many hold reasonably diversified portfolio. These portfolios are close enough to the market portfolio so that the beta of a security is likely to be a reasonable measure of its risk.

In other words, beta of a stock measures the sensitivity of the stock with reference to a broad based market index like BSE Sensex. For example, a beta of 1.3 for a stock would indicate that this stock is 30 per cent riskier than the Sensex. Similarly, a beta of a 0.8 would indicate that the stock is 20 per cent (100 – 80) less risky than the Sensex. However, a beta of one would indicate that the stock is as risky as the stock market index.

Question-2 [Nov-2004-Old-4M]

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 such as 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, however, refers to 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-3 [May-2006-Old-6M]

Briefly explain the objectives of "Portfolio Management".

Answer:

Objectives of Portfolio Management

Portfolio management is concerned with efficient management of portfolio investment in financial assets, including shares and debentures of companies. The management may be by professionals or others or by individuals themselves. A portfolio of an individual or a corporate unit is the holding of securities and investment in financial assets. These holdings are the result of individual preferences and decisions regarding risk and return.

The investors would like to have the following objectives of portfolio management:

- (a) Capital appreciation.
- (b) Safety or security of an investment.
- (c) Income by way of dividends and interest.
- (d) Marketability.
- (e) Liquidity.
- (f) Tax Planning - Capital Gains Tax, Income tax and Wealth Tax.
- (g) Risk avoidance or minimization of risk.
- (h) Diversification, i.e. combining securities in a way which will reduce risk.

It is necessary that all investment proposals should be assessed in terms of income, capital appreciation, liquidity, safety, tax implication, maturity and marketability i.e., saleability (i.e., saleability of securities in the market). The investment strategy should be based on the above objectives after a thorough study of goals of the investor, market situation, credit policy and economic environment affecting the financial market.

The portfolio management is a complex task. Investment matrix is one of the many approaches which may be used in this connection. The various considerations involved in investment decisions are liquidity, safety and yield of the investment. Image of the organization is also to be taken into account. These considerations may be taken into account and an overall view obtained through a matrix approach by allotting marks for each consideration and totaling them.

Question-4 [Nov-2006-Old-6M] [MTP-May-2023]

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

- (i) **Market risk:** Even if the earning power of the corporate sector and the interest rate structure remain more or less unchanged prices of securities, equity shares in particular, tend to fluctuate. Major cause appears to be the changing psychology of the investors. The 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.
- (ii) **Interest Rate Risk:** The change in the interest rate has a bearing on the welfare of the investors. As the interest rate goes up, the market price of existing fixed income securities falls and vice versa. This happens because the buyer of a fixed income security would not buy it at its par value or face value if its fixed interest rate is lower than the prevailing interest rate on a similar security.
- (iii) **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.
- (iv) **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 the change in real value of returns.

Classification of Unsystematic Risk

- (i) **Business Risk:** As a holder of corporate securities (equity shares or debentures) 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.
- (ii) **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.
- (iii) **Default Risk:** Default risk refers to the 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-5 [Nov-2009-Old-6M] [Nov-2008-Old-5M] [May-2006-Old-3M]

Discuss the Capital Asset Pricing Model (CAPM) and its relevant assumptions. Or Write a short note on assumptions of CAPM.

Answer:

Capital Asset Pricing Model: The mechanical complexity of the Markowitz's portfolio model kept both practitioners and academics away from adopting the concept for practical use. Its intuitive logic, however, spurred the creativity of a number of researchers who began examining the stock market implications that would arise if all investors used this model. As a result, what is referred to as the Capital Asset Pricing Model (CAPM), was developed.

The Capital Asset Pricing Model was developed by Sharpe, Mossin and Linter in 1960. The model explains the relationship between the expected return, non-diversifiable risk and the valuation of securities. It considers the required rate of return of a security on the basis of its contribution to the total risk. It is based on the premises that the diversifiable risk of a security is eliminated when more and more securities are added to the portfolio. However, the systematic risk cannot be diversified and is related with that of the market portfolio. All securities do not have same level of systematic risk. The systematic risk can be measured by beta, β . Under CAPM, the expected return from a security can be expressed as:

$$\text{Expected return on security} = R_f + \text{Beta} (R_m - R_f)$$

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). A major implication of CAPM is that not only every security but all portfolios too must plot on SML. This implies that in an efficient market, all securities are expected returns commensurate with their riskiness, measured by β .

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 framework for evaluating any investment decision where capital is committed with a goal of producing future returns. However, there are certain limitations of the theory. Some of these limitations are as follows:

- (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 emphasizes 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 [Nov-2008-Old-5M]

Explain briefly the capital Asset pricing model used in the context of valuation of securities.

Answer:

Portfolio theories have undergone major changes over the years. The current standard in valuation theory is found in the CAPM. It is an economic model that describes how securities are priced in the market. Its major merit lies in recognizing the difference or distinction between risk of holding a single asset and holding a portfolio.

The CAPM formula:

$$E(R_p) = R_f + \beta_p [E(R_m) - R_f]$$

Where:

$E(R_p)$ = Expected return of portfolio

R_f = Risk free rate of Returns

β_p = Portfolio Beta

$E(R_m)$ = Expected return on Market portfolio

The CAPM formula is based on certain assumptions regarding rationality and homogeneity of investors etc. and is subjected to criticism on this score.

Question-7 [May-2011-Old-4M]

Discuss how the risk associated with securities is effected by Government policy.

Answer:

The risk from Government policy to securities can be impacted by any of the following factors.

- (i) Licensing Policy
- (ii) Restrictions on commodity and stock trading in exchanges
- (iii) Changes in FDI and FII rules.
- (iv) Export and import restrictions
- (v) Restrictions on shareholding in different industry sectors
- (vi) Changes in tax laws and corporate and Securities laws.

Question-8 [Dec-2021-4M]

Buy and hold is one of the policies of portfolio rebalancing. Briefly explain other policies of portfolio rebalancing.

Answer:

While one policy of rebalancing portfolio is Buy and Hold the two policies are as follows:

- (i) **Constant Mix Policy:** Contrary to above policy this policy is a 'Do Something Policy'. Under this policy investor maintains an exposure to stock at a constant percentage of total portfolio. This strategy involves periodic rebalancing to required (desired) proportion by purchasing and selling stocks as and when their prices go down and up respectively. In other words this plan specifies that value of aggressive portfolio to the value of conservative portfolio will be held constant at a predetermined ratio. However, it is important that this action is taken only when there is change in the prices of share at a predetermined percentage.

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

Target Investment in Shares = Multiplier (Portfolio Value – Floor Value)

Multiplier is a fixed constant whose value shall be more than 1.

Question-9 [MTP-Nov-2023]

Explain the key features of Alternative Investments that make them different from other investment avenues.

Answer:

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 very 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 may 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 extensive analysis is required by the Portfolio Managers.
- (vi) Leveraged Buying – Generally investment in alternative investments is highly leveraged

Question-10 [MTP-Nov-2023]

Explain the advantages and Limitation of Capital Asset Pricing Model (CAPM).

Answer:

The advantages of CAPM can be listed as:

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

There are certain limitations of CAPM as well, which are discussed as follows:

- (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: By emphasizing on systematic risk only, unsystematic risks are of importance to share holders 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 is multiple risk free rates for one while for another, markets being volatile it varies over time period.

Question-11 [MTP-Nov-2022] [MTP-Nov-2020]

EXPLAIN various Asset Allocation Strategies.

Answer:

There are four asset allocation strategies:

- (1) **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.
- (2) **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.

- (4) **Insured Asset Allocation:** Under this strategy, risk exposure for changing portfolio values (wealth) is adjusted; more value means more ability to take risk.

Question-12 [MTP-May-2021]

Explain the strategy of Portfolio rebalancing under which the value of a portfolio shall not below a specified value in normal market conditions.

Answer:

Under Constant Proportion Portfolio Insurance (CPPI) strategy investor sets a floor below which he does not wish his asset to fall called floor, which is invested in some non-fluctuating assets such as Treasury Bills, Bonds etc. The value of portfolio under this strategy shall not fall below this specified floor under normal market conditions. This strategy performs well especially in bull market as the value of shares purchased as cushion increases. In contrast in bearish market losses are avoided by sale of shares. It should however be noted that this strategy performs very poorly in the market hurt by sharp reversals.

The following equation is used to determine equity allocation:

Target Investment in Shares = multiplier (Portfolio Value – Floor Value)

Multiplier is a fixed constant whose value shall be more than 1.

IMORTANT NOTES

This image shows a single sheet of white paper with horizontal blue ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

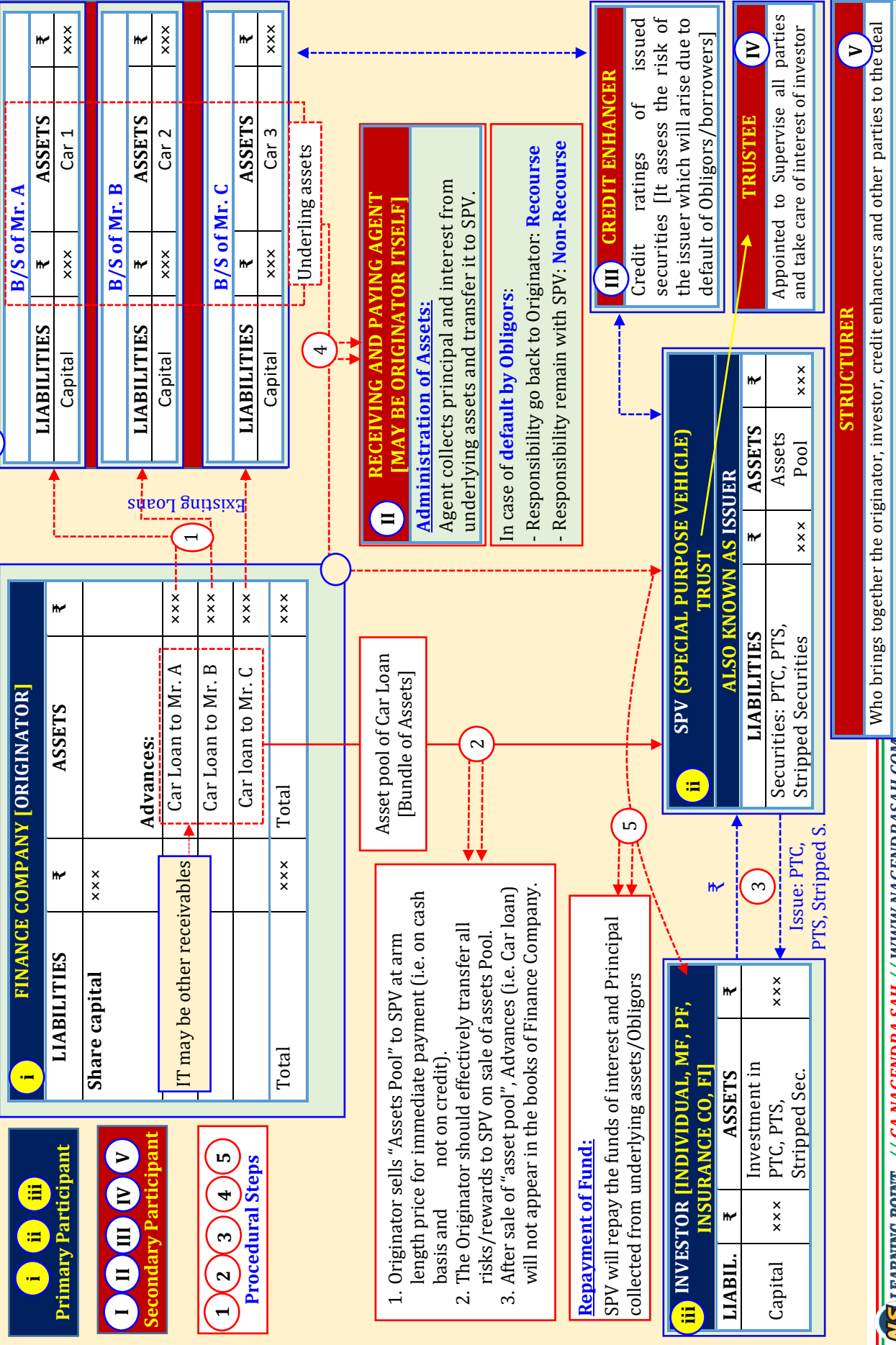


Chapter - 6

SECURITIZATION

Contents

1. DEFINITION AND FEATURES OF SECURITIZATION	3
2. BENEFITS OF SECURITIZATION	3
(A) FROM THE ANGLE OF ORIGINATOR	4
(B) FROM THE ANGLE OF INVESTOR.....	4
3. PARTICIPANTS IN SECURITIZATION	4
(A) PRIMARY PARTICIPANTS	4
(B) SECONDARY PARTICIPANTS	5
4. MECHANISM OF SECURITIZATION.....	6
5. PROBLEMS IN SECURITIZATION.....	6
6. SECURITIZATION INSTRUMENTS.....	7
(A) PASS THROUGH CERTIFICATES (PTC)	8
(B) PAY THROUGH SECURITY (PTS)	8
(C) STRIPPED SECURITIES	8
7. PRICING OF THE SECURITIZED INSTRUMENTS.....	8
8. RISKS IN SECURITIZATION	9
9. TOKENIZATION	10
(A) APPLICATIONS OF BLOCKCHAIN	10
(B) RISKS ASSOCIATED WITH BLOCKCHAIN	11
(C) SIMILARITIES BETWEEN TOKENIZATION AND SECURITIZATION	11
10. SECURITIZATION IN INDIA.....	11

SECURITISATION PROCESS:

DEFINITION AND FEATURES OF SECURITIZATION

Question: [MTP-Nov 2018-New-4M] [MTP-May-2023]

Explain the features of securitization.

Questions: [Jan -2021 – 4 Marks] [Nov-2022-4M] [RTP-May-2023]

"The process of securitisation can be viewed as process of creation of additional financial product of securities in the market backed by collaterals." What are the other features? Describe.

Questions: [MTP-Nov-2023]

Not only Bundling and Unbundling is only feature of Securitisation, there are other features too of the same. Explain.

Questions: [MTP-Nov-2022] [MTP-May-2022]

"Securitisation is the process of repackaging or rebundling of illiquid assets into marketable securities". EXPLAIN.

Answer:

The process of securitization typically involves the creation of pool of assets from the illiquid financial assets, such as receivables or loans which are marketable. In other words, it is the process of repackaging or re-bundling of illiquid assets into marketable securities. These assets can be automobile loans, credit card receivables, residential mortgages or any other form of future receivables.

FEATURES OF SECURITIZATION

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

BENEFITS OF SECURITIZATION

Question: [May-2018- New-4M] [May 2022-4M]

Explain the benefits of securitization from the prospective of both originator as well as investor.

Question: [MTP-May-2023]

"Securitisation is beneficial from the angle of various parties involved in it". Explain

Question: [MTP-May-2023]

Explain various benefits that accrues to an investor by investing money in the Securitized Instruments.

Answer:

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

(A) FROM THE ANGLE OF ORIGINATOR

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

(B) FROM THE ANGLE OF INVESTOR

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

PARTICIPANTS IN SECURITIZATION

Questions: [RTP- May 2018]

Distinguish between primary and secondary participant in securitization.

Questions: [MTP-Nov-2018-New-4M] [MTP-May-2021]

Discuss briefly the primary participants in the process of securitization.

Questions: [Jan-2021 – 4 Marks] [MTP-May-2023]

Participants are required for the success of the securitisation process. Discuss their roles.

Questions: [RTP-May-2021] [MTP-Nov-2023] [MTP-Nov-2022]

Explain the Secondary Participants involved in the process of Securitization of Instruments.

Answer:

Broadly, the participants in the process of securitization can be divided into two categories; one is Primary Participant and the other is Secondary Participant.

(A) PRIMARY PARTICIPANTS

1. Originator	● It is the initiator of deal or can be termed as securitizer. ● It is an entity which sells the assets lying in its books and receives the funds generated through the sale of such assets.
----------------------	---

	● The originator transfers both legal as well as beneficial interest to the Special Purpose Vehicle (discussed later).
2. Special Purpose Vehicle (SPV)	● It is created for the purpose of executing the deal. Since issuer originator transfer all rights in assets to SPV, it holds the legal title of these assets. ● It is created especially for the purpose of securitization only and normally could be in form of a company, a firm, a society or a trust. ● The main objective of creating SPV to remove the asset from the Balance Sheet of Originator. Since, SPV makes an upfront payment to the originator, it holds the key position in the overall process of securitization. Further, it also issues the securities (called Asset Based Securities or Mortgage Based Securities) to the investors.
3. 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 agree.

(B) SECONDARY PARTICIPANTS

1. Obligor	Actually they are the main source of the whole securitization process. They are the parties who owe money to the firm and are assets in the Balance Sheet of Originator. The amount due from the obligor is transferred to SPV and hence they form the basis of securitization process and their credit standing is of paramount importance in the whole process
2. Rating Agency	Since the securitization is based on the pools of assets rather than the originators, the assets have to be assessed in terms of its credit quality and credit support available. 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. Although rating agency is secondary to the process of securitization but it plays a vital role.
3. Receiving and Paying agent (RPA):	Also, called Servicer or Administrator, it collects the payment due from obligor(s) and passes it to SPV. It also follows up with defaulting borrower and if required initiate appropriate legal action against them. Generally, an originator or its affiliates acts as servicer.
4. 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.
5. Credit Enhancer	● Since investors in securitized instruments are directly exposed to performance of the underlying and sometime may have limited or no recourse to the originator, they seek additional comfort in the form of credit enhancement. ● 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.
6. Structurer	It brings together the originator, investors, credit enhancers and other parties to the deal of securitization. Normally, these are investment bankers also called arranger of the deal. It ensures that deal meets all legal, regulatory, accounting and tax laws requirements.

MECHANISM OF SECURITIZATION

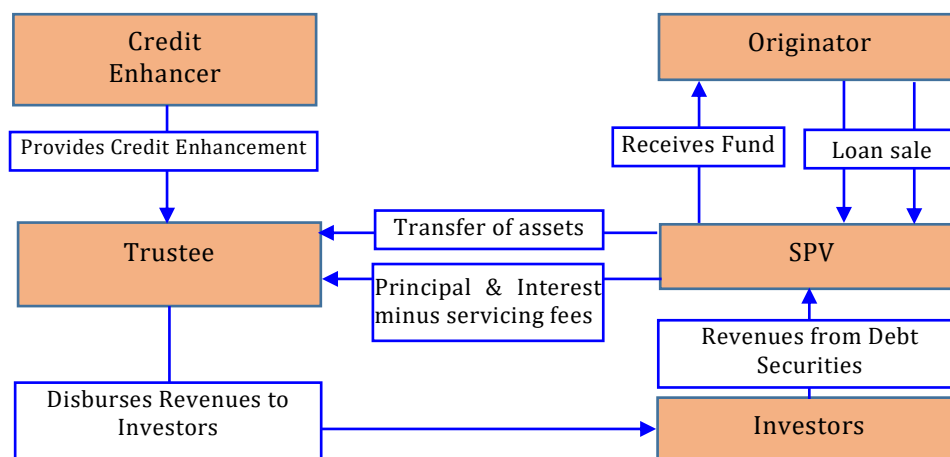
Question: [May 2018-New-4M] [May-2019-4M] [RPT-Aug-2020] [MTP-May-2019-6M]

Discuss briefly the steps involved in securitization mechanism.

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	One assets have been pooled, they are transferred to Special Purpose Vehicle (SPV) especially created for this purpose.
3. Sale of Securitised Papers	SPV designs the instruments based on nature of interest, risk, tenure etc. based on pool of assets. These instruments can be Pass Through Security or Pay Through Certificates, (discussed later).
4. Administration of assets	The administration of assets is subcontracted back to originator which collects principal and interest from underlying assets and transfer it to SPV, which works as a conduit.
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.

The mechanism of Securities is shown below in diagrammatic form.



PROBLEMS IN SECURITIZATION

Question: [SM-TYKQ] [Nov-2019-4M]

What are the main problems faced in securitisation especially in Indian context?

Question: [MPT-Nov-2019-4M] [Nov-2019-4M] [July-2021-4M] [RTP-Nov-2020] [MTP-May-2020]

Describe the problems faced in growth of securitization of instruments especially in Indian Context?

Question: [Nov-2023-4M]

"Lack of existence of a well-developed debt market in India, is an obstacle that hinders the growth of the Secondary Market of securitized or asset backed Securities". Is it true?

What are the other problems in Securitization Process? (Any three)

Question: [MTP-Nov-2023]

"Though in recent period of time the concept of securitisation has become popular in India as a source of Off-Balance Sheet source of financing but its level of growth is still far behind" Explain.

Question: [MTP-Nov-2021]

List out the reasons for dismal growth of Securitization of instruments in India.

Answer:

Following are main problems faced in growth of Securitization of instruments especially in Indian context:

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

SECURITIZATION INSTRUMENTS

Question: [MTP-May2018-5M] [SM-TYKQ] [MTP-May-2019-6M] [MTP-Nov-2022]

Describe various securitization instruments.

Question: [SM-TYKQ] [NOV-2020-4mark] [MTP-May-2021]

Differentiate between PTC and PTS.

Question: [May-2023-4M]

'Pay through securities' are in the nature of participation certificates that enable the investors to take a direct exposure on the performance of the securitized assets. 'Pass Through Certificates', on the other hand, gives investors only a charge against the securitized assets. Do you agree with the statement? Justify your stand.

Hint: Distinguish between how PTC is different from PTS.

Question: [MTP-May-2019-4M]

Describe the concept of stripped securities.

Answer:

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

(A) PASS THROUGH CERTIFICATES (PTCS)

(B) PAY THROUGH SECURITY (PTS)

(C) STRIPPED SECURITIES

(A) PASS THROUGH CERTIFICATES (PTC)	(B) PAY THROUGH SECURITY (PTS)	(C) STRIPPED SECURITIES
In PTC, originator transfers the entire receipt of cash in form of interest or principal repayment from the assets sold. Thus, these securities represent direct claim of the investors on all the assets that has been securitized through SPV. Since all cash flows are transferred the investors carry proportional beneficial interest in the asset held in the trust by SPV. It should be noted that since it is a direct route any prepayment of principal is also proportionately distributed among the securities holders. Further, due to these characteristics on completion of securitization by the final payment of assets, all the securities are terminated simultaneously. Skewness of cash flows occurs in early stage if principals are repaid before the scheduled time.	In PTS, all cash flows are passed to the performance of the securitized assets and remove limitation to single mature. In contrast to PTC in PTS, SPV debt securities backed by the assets and hence it can restructure different tranches from varying maturities of receivables. In this structure, it permits desynchronization of servicing of securities issued from cash flow generating from the asset. Further, this structure also permits the SPV to reinvest surplus funds for short term as per their requirement. Since, in Pass Through, all cash flow immediately in PTS in case of early retirement of receivables plus cash can be used for short term yield. This structure also provides the freedom to issue several debt tranches with varying maturities.	Stripped Securities are created by dividing the cash flows associated with underlying securities into two or more new securities. Those two securities are as follows: (I) INTEREST ONLY (IO) SECURITIES (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. Accordingly, the holder of IO securities receives only interest while PO security holder receives only principal. Being highly volatile in nature these securities are less preferred by investors. In contrast, value of IO's securities increases when interest rate goes up in the market as more interest is calculated on borrowings. However, when interest rate due to prepayments of principals, IO's tends to fall. Thus, from the above, it is clear that it is mainly perception of investors that determines the prices of IOs and POs.

PRICING OF THE SECURITIZED INSTRUMENTS

Question: [MTP-May-2019-4M] [Dec-2021-4M] [RTP-Nov-2023]

Explain the pricing of the securitized Instrument.

Question: [MTP-Nov-2021]

"While pricing the securitized instruments, it is important that it should be acceptable to both originators as well as to the investors". Explain.

Answer:

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

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

(B) From Investor's Angle	From an investor's angle security price can be determined by discounting best estimate of expected future cash flows using rate of yield to maturity of a security of comparable security with respect to credit quality and average life of the securities. This yield can also be estimated by referring the yield curve available for marketable securities, though some adjustments is needed on account of spread points, because of credit quality of the securitized instruments.
----------------------------------	--

RISKS IN SECURITIZATION

In a securitization transaction, investors are exposed to several risks at each stage of the transaction. The various types of risks in any securitization transaction are as follows:

1. Credit risk or Counterparty risk

It is the prime risk wherein investors are prone to the risk of bankruptcy and non-performance of the servicer.

2. Legal risks

Since in the Indian context it is a recently developed concept there is an absence of conclusive judicial precedent or explicit statutory provisions on securitization transactions. As a result, any dispute over the legal ownership of the assets is likely to result in uncertainty regarding investor pay-outs from the pool cash flow.

3. Market risks

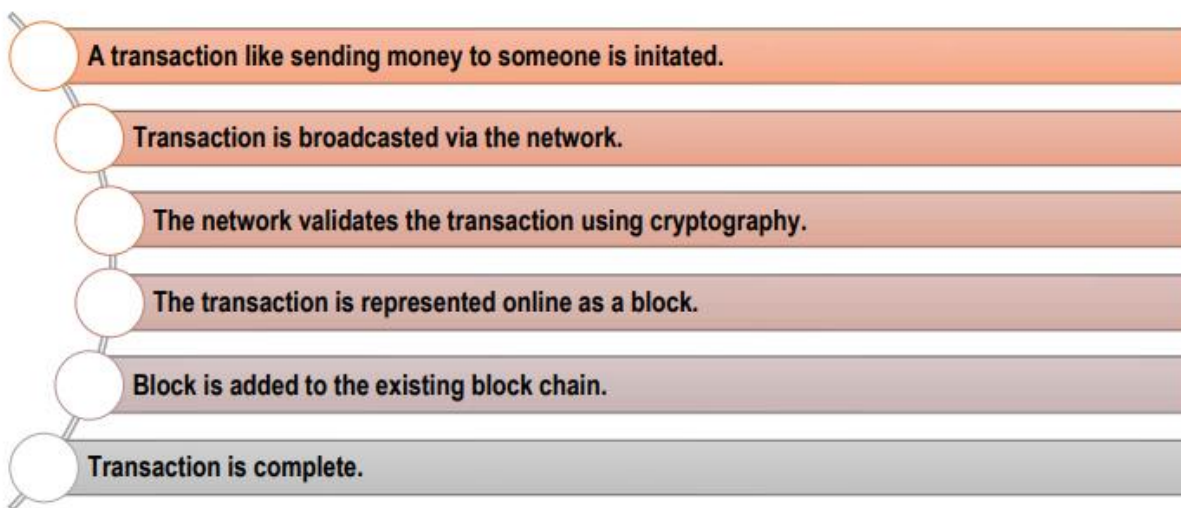
Market risks represent risks external to the transaction and include market-related factors that impact the performance of the transaction. Some of these risks are as follows:

(a) Macroeconomic risks:	The performance of the underlying loan contracts depends on macroeconomic factors, such as industry downturns or adverse price movements of the underlying assets. For example, in the transportation industry a continuous decline in industrial production may lead to a downtrend in the use of services of the Commercial Vehicles (CVs) adversely impacting the cash flow of CVs operators. This in turn, may impact repayments on CV loans. Similarly, a fall in the prices of the CVs may increase chances of default as the borrower may wilfully default the loan and let the finance company repossess and sell the underlying vehicle instead of retaining it and continuing to pay instalments on time.
(b) Prepayment risks:	A change in the market interest rate represents a difficult situation for investors because it is a combination of prepayment risk and volatile interest rates. With a reduction in interest rates generally prepayment of retail loans increases, resulting in reinvestment risk for investors because investors may receive their monies ahead of schedule and may not be able to reinvest the amount at the same yield.
(c) Interest rate risks:	This risk is prominent where the loans in the pool are based on a floating rate and investor pay-outs are based on a fixed rate or vice versa. It results in an interest rate mismatch and can lead to a situation where the pool cash inflow, even at 100% collection efficiency, is not sufficient to meet investor pay-outs. Interest rate swaps can be used to hedge this type of risk to some extent.

TOKENIZATION

Blockchain, also known as Distributed Ledger Technology (DLT), is a decentralized, peer-to-peer open ledger system for recording transactions. It operates without the need for trusted third parties and ensures permanence of entries through an append-only database. Transactions are irreversible, and any changes result in new recorded transactions. The decentralized network is not controlled by banks, corporations, or governments. In a blockchain, a chain of blocks is used, with each block representing digital information in a public database. A simple analogy is a Google Doc, where a document is distributed, not copied, allowing real-time, transparent recording of changes accessible to all parties simultaneously.

Following figure represents the working of any Blockchain transaction:



(A) APPLICATIONS OF BLOCKCHAIN

(a) Financial Services:	Blockchain can be used to provide an automated trade lifecycle in terms of the transaction log of any transaction of asset or property - whether physical or digital such as laptops, smartphones, automobiles, real estate, etc. from one person to another.
(b) Healthcare:	Blockchain provides secure sharing of data in healthcare industry by increasing the privacy, security, and interoperability of the data by eliminating the interference of third party and avoiding the overhead costs.
(c) Government:	At the government front, there are instances where the technical decentralization is necessary but politically should be governed by governments like land registration, vehicle registration and management, e-voting etc. Blockchain improves the transparency and provides a better way to monitor and audit the transactions in these systems.
(d) Travel Industry:	Blockchain can be applied in money transactions and in storing important documents like passports/other identification cards, reservations and managing travel insurance, loyalty, and rewards thus, changing the working of travel and hospitality industry.
(e) Economic Forecasts:	Blockchain makes possible the financial and economic forecasts based on decentralized prediction markets, decentralized voting, and stock trading, thus enabling the organizations to plan and shape their businesses.

(B) RISKS ASSOCIATED WITH BLOCKCHAIN

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

(C) SIMILARITIES BETWEEN TOKENIZATION AND SECURITIZATION

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

SECURITIZATION IN INDIA

- It is the Citi Bank who pioneered the concept of securitization in India by bundling of auto loans in securitized instruments.
- In order to encourage securitization, the Government has come out with Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) Act, 2002, to tackle menace of Non-Performing Assets (NPAs) without approaching to Court.
- With growing sophistication of financial products in Indian Capital Market, securitization has occupied an important place.
- As mentioned above, though, initially started with auto loan receivables, it has become an important source of funding for micro finance companies and NBFCs and even now a day commercial mortgage backed securities are also emerging. e.g. ICICI Bank, HDFC Bank, NHB etc.
- As per a report of CRISIL, securitization transactions in India scored to the highest level of approximately 70000 crores, in Financial Year 2016. (Business Line, 15th June, 2016)

In order to further enhance the investor base in securitized debts, SEBI allowed FPIs to invest in securitized debt of unlisted companies up to a certain limit.

IMORTANT NOTES

This image shows a single sheet of white paper with horizontal blue ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Chapter -7

MUTUAL FUNDS

Contents

Question.1: [Nov-2008-Old-4M]	3
Write short notes on the role of Mutual Funds in the Financial Market.	3
Question.2: [Nov-2003-Old -6M]	3
Explain how to establish a Mutual Fund.	3
Question-3: [May-2007-Old -4M] [June 2009-Old -5M]	4
What are the advantages of investing in Mutual Funds?	4
Question-4: [Nov-2008-Old -4M]	5
What are the drawbacks of investments in Mutual Funds?	5
Question-5: [May-2004-Old -4M] [Nov-2004-Old -6M]	5
Explain briefly about net asset value (NAV) of a Mutual Fund Scheme.	5
Question-6: [Nov-2005-Old -8M] [MTP-May-2021]	6
What are the investors' rights & obligations under the Mutual Fund Regulations? Explain different methods for evaluating the performance of Mutual Fund.	6
Question-7: [Nov-2014-Old -4M]	7
What are the signals that indicate that is time for an investor to exit a mutual fund scheme?	7
Question-8: [May-2010-Old -4M] [Nov-2013-Old -4M]	8
Briefly explain what an exchange traded fund is.	8
Question-9: [Nov-2010-Old -4M] [May-2015-Old -4M]	8
Distinguish between Open-ended and Close-ended Schemes.	8
Question-10: [Nov-2011-Old -4M] [Nov-2015-Old -4M]	9
Write short notes on Money market mutual fund.	9
Question-11 [May-2005-Old -4M]	9
(i) Who can be appointed as Asset Management Company (AMC)?	9
(ii) Write the conditions to be fulfilled by an AMC.	9
(iii) What are the obligations of AMC?	9
Question-12 [Nov-2017-Old-4M]	10
Differentiate between 'Off-shore funds" and 'Asset Management Mutual Funds'.	10

Question-13 [RTP-May-2019-New]	10
Explain the concept of side pocketing in mutual fund.	10
[Nov-2020-New-4M]	10
Side Pocketing enhances the value of the Mutual Fund. Do you agree? Briefly explain the process of side pocketing.....	10
Question-14 [MTP-May-2019-New-4M]	11
Explain about direct plan in Mutual Fund.	11
Question-15 [July-2021-New-4M]	11
Describe Tracking error. List the reasons for it.	11
Question-16 [May-2023-New-4M]	11
Index Funds is one of the Special Funds. What are other funds in Special Funds category?	11
Question-17 [MTP-May-2021]	12
The idea of Quant Fund is stock-picking free from human intervention. Discuss.	12
Question-18.....	12
How to evaluate the performance of a Mutual Fund?	12
Question-19.....	13
What are the roles of fund managers in Mutual Funds?	13
Question-20.....	14
What are the roles of FIIs in mutual funds?	14

Question.1: [Nov-2008-Old-4M]

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

Answer:

Role of Mutual Funds in the Financial Market:

Mutual funds have opened new vistas to investors and imparted much needed liquidity to the system. In this process, they have challenged the hitherto dominant role of the commercial banks in the financial market and national economy.

- ⇒ The role of mutual funds in the financial 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. However, how can one diversify his portfolio and manage risk if he has just 1,000 rupees to invest. It is definitely not possible with direct investments. 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: [Nov-2003-Old -6M]

Explain how to establish a Mutual Fund.

Answer:

Establishment of a Mutual Fund:

- ⇒ A mutual fund is required to be registered with the Securities and Exchange Board of India (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. A sponsor means anybody corporate who, acting alone or in combination with another body corporate, establishes a mutual fund after completing the formalities prescribed in the SEBI's Mutual Fund Regulations.
- ⇒ The role of sponsor is akin to that of a promoter of a company, who provides the initial capital and appoints the trustees. 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.
- ⇒ The Mutual Fund has to be established as either a trustee company or a Trust, under the Indian Trust Act and the instrument of trust shall be in the form of a deed. The deed shall be executed by the sponsor in favour of the trustees named in the instrument of trust. The trust deed shall be duly registered under the provisions of the Indian Registration Act, 1908. The trust deed shall contain clauses specified in the Third Schedule of the Regulations.
- ⇒ 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.
- ⇒ The sponsor should contribute at least 40% to the net worth of the Asset Management Company. The Trustee should hold the property of the Mutual Fund in trust for the benefit of the unit holders.
- ⇒ SEBI regulations require that at least two-thirds of the directors of the Trustee Company or board of trustees must be independent, that is, they should not be associated with the sponsors. Also, 50 per cent of the directors of AMC must be independent. The appointment of the AMC can be terminated by majority of the trustees or by 75% of the unit holders of the concerned scheme.

- ⇒ The AMC may charge the mutual fund with Investment Management and Advisory fees subject to prescribed ceiling. Additionally, the AMC may get the expenses on operation of the mutual fund reimbursed from the concerned scheme.
- ⇒ The Mutual fund also appoints a custodian, holding valid certificate of registration issued by SEBI, to have custody of securities held by the mutual fund under different schemes. In case of dematerialized securities, this is done by Depository Participant. The custodian must be independent of the sponsor and the AMC.

Question-3: [May-2007-Old -4M] [June 2009-Old -5M]

What are the advantages of investing in Mutual Funds?

Answer:

The advantages of investing in a Mutual Fund are:

1. Professional Management:

Investors avail the services of experienced and skilled professionals who are backed by a dedicated investment research team which analyses the performance and prospects of companies and selects suitable investments to achieve the objectives of the scheme.

2. Diversification:

Mutual Funds invest in a number of companies across a broad cross-section of industries and sectors. Investors achieve this diversification through a Mutual Fund with far less money and risk than one can do on his own.

3. Convenient Administration:

Investing in a Mutual Fund reduces paper work and helps investors to avoid many problems such as bad deliveries, delayed payments and unnecessary follow-up with brokers and companies.

4. Return Potential:

Over a medium to long term, Mutual Fund has the potential to provide a higher return as they invest in a diversified basket of selected securities.

5. Low Costs:

Mutual Funds are a relatively less expensive way to invest compared to directly investing in the capital markets because the benefits of scale in brokerage, custodial and other fees translate into lower costs for investors.

6. Liquidity:

In open ended schemes investors can get their money back promptly at net asset value related prices from the Mutual Fund itself. With close-ended schemes, investors can sell their units on a stock exchange at the prevailing market price or avail of the facility of direct repurchase at NAV related prices which some close ended and interval schemes offer periodically.

7. Transparency:

Investors get regular information on the value of their investment in addition to disclosure on the specific investments made by scheme, the proportion invested in each class of assets and the fund manager's investment strategy and outlook.

8. 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.

9. 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.

10. 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.

11. 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-4: [Nov-2008-Old -4M]

What are the drawbacks of investments in Mutual Funds?

Answer:

- (a) There is no guarantee of return as some Mutual Funds may underperform and Mutual Fund Investment may depreciate in value which may even effect erosion / Depletion of principal amount.
- (b) Diversification may minimize risk but does not guarantee higher return.
- (c) Mutual funds performance is judged on the basis of past performance record of various companies. But this cannot take care of or guarantee future performance.
- (d) Mutual Fund cost is involved like entry load, exit load, fees paid to Asset Management Company etc.
- (e) There may be unethical Practices e.g. diversion of Mutual Fund amounts by Mutual Fund /s to their sister concerns for making gains for them.
- (f) MFs, systems do not maintain the kind of transparency, they should maintain
- (g) Many MF scheme are, at times, subject to lock in period, therefore, deny the market drawn benefits
- (h) At times, the investments are subject to different kind of hidden costs.
- (i) Redressal of grievances, if any, is not easy
- (j) 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.
- (k) Liquidating a mutual fund portfolio may increase risk, increase fees and commissions, and create capital gains taxes.

Question-5: [May-2004-Old -4M] [Nov-2004-Old -6M]

Explain briefly about net asset value (NAV) of a Mutual Fund Scheme.

Answer:

- ⇒ Net Asset Value (NAV) is the total asset value (net of expenses) per unit of the fund calculated by the Asset Management Company (AMC) at the end of every business day.
- ⇒ Net Asset Value on a particular date reflects the realizable value that the investor will get for each unit that he is holding if the scheme is liquidated on that date. The day of valuation of NAV is called the valuation day.
- ⇒ The performance of a particular scheme of a mutual fund is denoted by Net Asset Value (NAV).
- ⇒ Net Asset Value may also be defined as the value at which new investors may apply to a mutual fund for joining a particular scheme.
- ⇒ It is the value of net assets of the fund.
- ⇒ The investors' subscription is treated as the capital in the balance sheet of the fund, and the investments on their behalf are treated as assets.
- ⇒ The value of portfolio is the aggregate value of different investments. The NAV is calculated for every scheme of the MF individually as follow:

$$\text{The Net Asset Value (NAV)} = \frac{\text{Number of units outstanding}}{\text{Net Assets of the scheme}}$$

- ⇒ Net Assets of the scheme will normally be:

Market value of investments + Receivables + Accrued Income + Other Assets – Accrued Expenses – Payables – Other Liabilities

- ⇒ Since investments by a Mutual Fund are marked to market, the value of the investments for computing NAV will be at market value.
- ⇒ The Securities and Exchange Board of India (SEBI) has notified certain valuation norms calculating net asset value of Mutual fund schemes separately for traded and non-traded schemes. Also, according to Regulation 48 of SEBI (Mutual Funds) Regulations, mutual funds are required to compute Net Asset Value (NAV) of each scheme and to disclose them on a regular basis – daily or weekly (based on the type of scheme) and publish them in at least two daily newspapers.
- ⇒ NAV plays an important part in investors' decisions to enter or to exit a MF scheme. Analyst use the NAV to determine the yield on the schemes.

Question-6: [Nov-2005-Old -8M] [MTP-May-2021]

What are the investors' rights & obligations under the Mutual Fund Regulations? Explain different methods for evaluating the performance of Mutual Fund.

Explain the different methods for evaluating the performance of a mutual fund.

Answer

Investors' Rights and Obligations under the Mutual Fund Regulations:

Important aspect of the mutual fund regulations and operations is the investors' protection and disclosure norms. It serves the very purpose of mutual fund guidelines. Due to these norms it is very necessary for the investor to remain vigilant. Investor should continuously evaluate the performance of mutual fund.

Following are the steps taken for improvement and compliance of standards of mutual fund:

1. All mutual funds should disclose full portfolio of their schemes in the annual report within one month of the close of each financial year. Mutual fund should either send it to each unit holder or publish it by way of an advertisement in one English daily and one in regional language.
2. The Asset Management Company must prepare a compliance manual and design internal audit systems including audit systems before the launch of any schemes. The trustees are also required to constitute an audit committee of the trustees which will review the internal audit systems and the recommendation of the internal and statutory audit reports and ensure their rectification.
3. The AMC shall constitute an in-house valuation committee consisting of senior executives including personnel from accounts, fund management and compliance departments. The committee would on a regular basis review the system practice of valuation of securities.
4. The trustees shall review all transactions of the mutual fund with the associates on a regular basis.

Investors' Rights

1. Unit holder has proportionate right in the beneficial ownership of the schemes assets as well as any dividend or income declared under the scheme.
2. For initial offers unit holders have right to expect allotment of units within 30 days from the closure of mutual offer period.
3. Receive dividend warrant within 42 days.
4. AMC can be terminated by 75% of the unit holders.
5. Right to inspect major documents i.e. material contracts, Memorandum of Association and Articles of Association (M.A. & A.A) of the AMC, Offer document etc.
6. 75% of the unit holders have the right to approve any changes in the close ended scheme.
7. Every unit holder have right to receive copy of the annual statement.
8. Right to wind up a scheme if 75% of investors pass a resolution to that effect.
9. Investors have a right to be informed about changes in the fundamental attributes of a scheme. Fundamental attributes include type of scheme, investment objectives and policies and terms of issue.
10. Lastly, investors can approach the investor relations officer for grievance redressal. In case the investor does not get appropriate solution, he can approach the investor grievance cell of SEBI. The investor can also sue the trustees.

Legal Limitations to Investors' Rights

1. Unit holders cannot sue the trust but they can initiate proceedings against the trustees, if they feel that they are being cheated.
2. Except in certain circumstances AMC cannot assure a specified level of return to the investors. AMC cannot be sued to make good any shortfall in such schemes.

Investors' Obligations:

1. An investor should carefully study the risk factors and other information provided in the offer document. Failure to study will not entitle him for any rights thereafter.
2. It is the responsibility of the investor to monitor his schemes by studying the reports and other financial statements of the funds.

Methods for Evaluating the Performance**1. Sharpe Ratio**

The excess return earned over the risk free return on portfolio to the portfolio's total risk measured by the standard deviation. This formula uses the volatility of portfolio return. The Sharpe ratio is often used to rank the risk-adjusted performance of various portfolios over the same time. The higher a Sharpe ratio, the better a portfolio's returns have been relative to the amount of investment risk the investor has taken.

$$\text{Standard}(S) = \frac{\text{Return of portfolio} - \text{Return of risk free investment}}{\text{Deviation of Portfolio}}$$

2. Treynor Ratio

This ratio is similar to the Sharpe Ratio except it uses Beta of portfolio instead of standard deviation. Treynor ratio evaluates the performance of a portfolio based on the systematic risk of a fund. Treynor ratio is based on the premise that unsystematic or specific risk can be diversified and hence, only incorporates the systematic risk (beta) to gauge the portfolio's performance.

$$T = \frac{\text{Return of portfolio} - \text{Return of risk free investment}}{\text{Beta of Portfolio}}$$

3. Jensen's Alpha

The comparison of actual return of the fund with the benchmark portfolio of the same risk. Normally, for the comparison of portfolios of mutual funds this ratio is applied and compared with market return. It shows the comparative risk and reward from the said portfolio. Alpha is the excess of actual return compared with expected return

Question-7: [Nov-2014-Old -4M]

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-8: [May-2010-Old -4M] [Nov-2013-Old -4M]*Briefly explain what an exchange traded fund is.***Answer:**

Exchange Traded Funds (ETFs) were introduced in US in 1993 and came to India around 2002. ETF is a hybrid product that combines the features of an index mutual fund and stock and hence, is also called index shares. These funds are listed on the stock exchanges and their prices are linked to the underlying index. The authorized participants act as market makers for ETFs.

ETF can be bought and sold like any other stock on stock exchange. In other words, they 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. NAV of an ETF is the value of the underlying component of the benchmark index held by the ETF plus all accrued dividends less accrued management fees.

There is no paper work involved for investing in an ETF. These can be bought like any other stock by just placing an order with a broker.

Some other important features 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-end fund, which trades throughout the trading day at prices that may be more or less than its net asset value.

Question-9: [Nov-2010-Old -4M] [May-2015-Old -4M]*Distinguish between Open-ended and Close-ended Schemes.***Answer:****Open Ended Scheme:**

- ⇒ 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 feature of the scheme is liquidity.

Close Ended Scheme:

- ⇒ 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 launch 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 route, some close-ended schemes give an option of selling back (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/Discount to NAV
Availability	Fund itself	Through Exchange where listed
Day Trading	Not possible	Expensive

Question-10: [Nov-2011-Old -4M] [Nov-2015-Old -4M]*Write short notes on Money market mutual fund.**Answer***Money Market Mutual Fund:**

- ⇒ 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.
- ⇒ Such schemes invest in safe highly liquid instruments included in commercial papers certificates of deposits and government securities.
- ⇒ The Money Market Mutual Fund (MMMF) schemes generally provide high returns and highest safety to the ordinary investors.
- ⇒ MMMF schemes are active players of the money market.
- ⇒ They channelize the idle short funds, particularly of corporate world, to those who require such funds. This process helps those who have idle funds to earn some income without taking any risk and with surety that whenever they will need their funds, they will get (generally in maximum three hours of time) the same.
- ⇒ 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 [May-2005-Old -4M]*(i) Who can be appointed as Asset Management Company (AMC)?**(ii) Write the conditions to be fulfilled by an AMC.**(iii) What are the obligations of AMC?**(i) Answer:*

Asset Management Company (AMC): A company formed and registered under Companies Act 1956 and which has obtained the approval of SEBI to function as an asset management company may be appointed by the sponsor of the mutual fund as AMC for creation and maintenance of investment portfolios under different schemes. The AMC is involved in the daily administration of the fund and typically has three departments:

- a) Fund Management;
- b) Sales and Marketing and
- c) Operations and Accounting.

*(ii) Answer:***Conditions to be fulfilled by an AMC**

- (1) The Memorandum and Articles of Association of the AMC is required to be approved by the SEBI.
- (2) Any director of the asset management company shall not hold the place of a director in another asset management company unless such person is independent director referred to in clause (d) of sub-regulation (1) of regulation 21 of the Regulations and the approval of the Board of asset management company of which such person is a director, has been obtained. At least 50% of the directors of the AMC should be independent (i.e. not associated with the sponsor).
- (3) The asset management company shall forthwith inform SEBI of any material change in the information or particulars previously furnished which have a bearing on the approval granted by SEBI.
 - (a) No appointment of a director of an asset management company shall be made without the prior approval of the trustees.
 - (b) The asset management company undertakes to comply with SEBI (Mutual Funds) Regulations, 1996.
 - (c) No change in controlling interest of the asset management company shall be made unless prior approval of the trustees and SEBI is obtained.
 - (i) A written communication about the proposed change is sent to each unit holder and an advertisement is given in one English Daily newspaper having nationwide circulation and in a newspaper published in the language of the region where the head office of the mutual fund is situated.
 - (ii) The unit holders are given an option to exit at the prevailing Net Asset Value without any exit load.
 - (iii) The asset management company shall furnish such information and documents to the trustees as and when required by the trustees.
- (4) The minimum net worth of an AMC should be ` 10 crores, of which not less than 40% is to be contributed by the sponsor.

(iii) Answer:

Obligations of the AMC

- (1) The AMC shall manage the affairs of the mutual funds and operate the schemes of such fund.
- (2) The AMC shall take all reasonable steps and exercise due diligence to ensure that the investment of the mutual funds pertaining to any scheme is not contrary to the provisions of SEBI Regulations and the trust deed of the mutual fund.

Question-12 [Nov-2017-Old-4M]

Differentiate between 'Off-shore 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-13 [RTP-May-2019-New]

Explain the concept of side pocketing in mutual fund.

[Nov-2020-New-4M]

Side Pocketing enhances the value of the Mutual Fund. Do you agree? Briefly explain the process of side pocketing.

Answer:

Side Pocketing: 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.

Process of Side Pocketing: 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 subsidiary have failed to fulfill 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-14 [MTP-May-2019-New-4M]*Explain about direct plan in Mutual Fund.**Answer:*

Asset management companies (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 plans 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.

Question-15 [July-2021-New-4M]*Describe Tracking error. List the reasons for it.**EXPLAIN how to measure divergence or deviation of return of a Mutual Fund Scheme that replicates any benchmark Index.**Answer:*

Tracking error can be defined as the divergence or deviation of a fund's return from the benchmarks return it is following. The passive fund managers closely follow or track the benchmark index. Although they design their investment strategy on the same index but often it may not exactly replicate the index return. In such situation, there is possibility of deviation between the returns. The tracking error can be calculated on the basis of corresponding benchmark return vis a vis quarterly or monthly average NAVs.

Reasons of Tracking Error:

Higher the tracking error higher is the risk profile of the fund. Whether the funds outperform or underperform their benchmark indices; it clearly indicates that fund managers are not following the benchmark indices properly. In addition to the same other reasons for tracking error are as follows:

- Transaction cost
- Fees charged by AMCs
- Fund expenses
- Cash holdings
- Sampling biasness

Thus, from above it can be said that to replicate the return to any benchmark index the tracking error should be near to zero.

Question-16 [May-2023-New-4M]*Index Funds is one of the Special Funds. What are other funds in Special Funds category?**Answer:*

The other funds in Special Fund category are as follows:

- (a) **International Funds:** A mutual fund located in India to raise money in India for investing globally.
- (b) **Offshore Funds:** A mutual fund located in India to raise money globally for investing in India.
- (c) **Sector Funds:** They invest their entire fund in a particular industry e.g. utility fund for utility industry like power, gas, public works.
- (d) **Money Market Funds:** These are predominantly debt-oriented schemes, whose main objective is preservation of capital, easy liquidity and moderate income. To achieve this objective, liquid funds invest predominantly in safer short-term instruments like Commercial Papers, Certificate of Deposits, Treasury Bills, G-Secs etc.
- (e) **Fund of Funds:** Fund of Funds (FoF) as the name suggests are schemes which invest in other mutual fund schemes. The concept is popular in markets where there are number of mutual fund offerings and choosing a suitable scheme according to one's objective is tough. Just as a mutual fund scheme invests in a portfolio of securities such as equity, debt etc., the underlying investments for a FoF is the units of other mutual fund schemes, either from the same fund family or from other fund houses.

- (f) **Capital Protection Oriented Fund:** The term 'capital protection oriented scheme' means a mutual fund scheme which is designated as such and which endeavours to protect the capital invested therein through suitable orientation of its portfolio structure. The orientation towards protection of capital originates from the portfolio structure of the scheme and not from any bank guarantee, insurance cover etc.

Question-17 [MTP-May-2021]

The idea of Quant Fund is stock-picking free from human intervention. Discuss.

Answer:

The given statement is true to a certain extent in reference to Mutual Funds where the concept of Quant Fund is becoming popular day by day.

Quant Fund follows a data-driven approach for stock selection or investment decisions based on a pre-determined rules or parameters using statistics or mathematics-based models.

Contrary to an active fund Manager who selects the quantum and timing of investments i.e. entry or exit, this fund completely rely on an automated programme for making decision for quantum of investment as well as its timings. It does not mean that there is no human intervention at all, the Fund Manager usually focuses on the robustness of the Models in use and also monitors their performance or some modification is required.

Sometime a Quant Fund manager is confused with Index Fund Manager but it is not so as the Index Fund Manager may entirely hands off the investment decision purely based on Index, while Quant Fund Manager often designs and monitors models that throw up the choices.

The main advantage of Quant Fund is that it eliminates the human biasness and subjectivity. Further using model-based approach also ensures consistency in strategy across the market conditions.

Also since the Quant Fund normally follows passive strategy, the exposure ratio tends to be lower.

Since Quant Fund uses highly sophisticated strategies investors who well understand Stock Valuation methods, different stock picking styles, the market sentiments and derivatives etc. should invest in the same. Further since Quant Fund are tested on the basis of historical data and past trends though cannot altogether be ignore but also cannot be used blindly as good indicators.

Thus, overall it can be said that whether it is human or a machine it is not easy to beat the market.

Question-18

How to evaluate the performance of a Mutual Fund?

Answer:

Both Quantitative and Qualitative Parameters can be used to evaluate the performance of any Mutual Fund.

Quantitative Parameters:

These parameters consist of quantitative data and numbers. Following are some quantitative parameters for the evaluation of Mutual Funds.

- (1) Risk Adjusted Returns:** - Basically it is the return of a Mutual Fund relative to the risk it assumed as benchmarked against the market and industry risk.

Suppose if we are given a choice to select a Mutual Fund out of the two Mutual Funds giving same return, then we shall opt for the fund that has lower risk.

- (2) Benchmark Returns:** - Benchmark can be defined as the quality or set of standards against which performance of Mutual Fund can be measured. A good Mutual Fund performs over and above its benchmark during all phases of market, this excess return is known as 'Alpha'. For example, generally Equity funds are benchmarked to the Sensex or Nifty 50. Suppose if during a particular period of time Index has provided a return of 11% whereas a Mutual Fund has provided a return of 13% then the same fund has outperformed the benchmark i.e., Index. Similarly, if same Fund has provided a return of 8% then it has underperformed.

- (3) Comparison to Peers:** - Similar to evaluating performance of Mutual Fund against Benchmark, the comparison of relative performance of fund with its peers (of same category) is another quantitative method because evaluation of performance in isolation does not have any meaning. Further there is a logic behind comparison with peers that it is fair to compare apples with apples not with oranges. A good mutual fund is supposed to consistently beat its peers in performance only then it is worthwhile to hold it.

- (4) **Comparison of Returns across different economic and market cycles:** - At the time of evaluating performance of any Mutual Fund it is not just looking across different time frames such as 6 months, 12 months etc. but performance during different economic and market cycles also needs to be evaluated because, due to some special economic or market condition a Mutual Fund might have outperformed/underperformed for a short time. It may not be necessary that such conditions shall be continued in future period for ever.
- (5) **Financial Measures:** - There are some financial measures that help in evaluation of performance of any Mutual Fund which are as follows:
- Expense Ratio:** - Discussed in earlier section, it ultimately impacts the return of a Mutual Fund Scheme.
 - Sharpe Ratio:** - As discussed in the chapter on Portfolio Management, this ratio measures the Mutual Fund's performance measured against the total risk (both systematic and unsystematic) taken.
 - Treynor Ratio:** - As discussed in the chapter on Portfolio Management, beta measures the volatility of return of a security vis-à-vis to the market, in mutual funds the Beta of a mutual fund measures volatility of a fund's return to return from its Benchmark. Treynor Ratio measures performance of a mutual fund against the systematic risk it has taken.
 - Sortino Ratio:** - A variation of Sharpe Ratio that considers and uses downside deviation instead of total standard deviation in denominator.

Qualitative Parameters:

Some of the Qualitative factors that need to be taken into account in addition to Quantitative Factors are as follows:-

- (1) **Quality of Portfolio:** - Quality of stocks and securities in the portfolio of the Mutual Funds is an important qualitative parameter. The reason is that the quality of the portfolio plays a big role in achieving superior returns. The qualitative characteristic of portfolio of Equity Mutual Fund involves allocation of funds in top Blue-chip companies, large companies and how diversified is the portfolio. The style followed can be growth, value or blend of the same. In Debt Funds, the quality of portfolio is measured on the basis of credit quality, average maturity and modified duration of the fixed asset securities.
- Not only that it is necessary that Mutual Fund should hold good quality stocks or securities, but it is also necessary the investment should be as per the objective of the Fund. Under normal circumstances, the fund having lower Portfolio Turnover ratio is considered to be better.
- (2) **Track record and competence of Fund Manager:** - Since Fund Manager decides about the selection of securities and takes investment decisions, his/her competence and conviction plays a very big role. The competence of a Fund Manager is assessed from his/her knowledge and ability to manage in addition to past performance.
- (3) **Credibility of Fund House Team:** - Team of Fund House also plays a big role towards the investors' interest. In addition to investment decisions, there are some other administrative tasks also such as redemption of units, crediting of dividend, providing adequate information etc. which play a crucial role in qualitative assessment of any mutual fund house.

Question-19

What are the roles of fund managers in Mutual Funds?

Answer:

Following are other key roles of a Fund Manager

- (a) **Compliances:** - Nowadays there are a plethora of Regulations in the Capital Market. As a result, the number of Regulatory Compliances has increased multifold. Fund Manager must ensure that:
- Compliance of various Guidelines as laid down by SEBI, AMFI etc.
 - Ensuring various reporting such as Expenses Ratio, redemption of funds etc.
 - Ensuring that investors are aware of various required details and rules.
 - Ensuring that all required documents are furnished on time.
- (b) **Constant Monitoring the Performance of the Fund:** - The role of a Fund Manager does not end with selection of securities or avenues for investments, but he/ she also has to evaluate them on a continuous basis. It is the Mutual Fund Manager's decision to enter or exit market that maximises the wealth of unit holders. The performance of a Fund Manager is not only judged on the basis of return but also on growth achieved above inflation and interest rate.

- (c) Creation of Wealth and Protection:** - This role can be considered as a fundamental role of a Fund Manager. Though wealth creation for investors is very important but reckless assumption to risk should be avoided. The investments should be made after a thorough research using Fundamental Analysis and Technical Analysis techniques.
- (d) Control over the works outsourced to third parties:** - In many cases some of the works of the Funds are required to be outsourced to any third party. In such cases, it is the duty of the Fund Manager to exercise proper control over functioning of the third party to ensure error free operations.

Question-20

What are the roles of FIIs in mutual funds?

Answer:

The FIIs play an important role for Indian Economy through their investment in Mutual Funds because of following reasons:

- (a) Enhanced Corporate Governance:** - Generally FIIs before making investment in any Mutual Fund carry out thorough due diligence of Corporate Governance. Hence, Corporate Governance is improved to a great extent.
- (b) Improved Competition in Market:** - With the investment of FIIs in Mutual Funds improvement takes place in the capital market.
- (c) Improved Inflow of Capital in the economy:** - With the investment of funds in Mutual Funds in the economy not only employment is generated but the position of Foreign Exchange also improves.

Chapter - 8

DERIVATIVE ANALYSIS & VALUATION

Contents

EXOTIC OPTIONS	3
CREDIT DERIVATIVES	3
COLLATERALIZED DEBT OBLIGATIONS (CDOS)	4
CREDIT DEFAULT SWAPS (CDSs).....	4
HOW REAL OPTION IS DIFFERENT FROM FINANCIAL OPTION	5
VALUATION OF REAL OPTIONS	6
TYPE OF REAL OPTIONS	6
WEATHER DERIVATIVES.....	7
ELECTRICITY DERIVATIVES.....	7
ELECTRICITY FORWARDS.....	8
ELECTRICITY FUTURES	8
ELECTRICITY SWAP	8
DERIVATIVE MISHAPS AND LESSONS	8
Question-1 [May-2010-Old -4M]	9
How is a stock market index calculated? Indicate any two important stock market indices.	9
Question-2 [Nov-2003-Old -4M] [Nov-2007-Old -5M].....	10
Write short note on Green shoe option.....	10
Question-3 [Nov-2007-Old -8M].....	10
(i) What are derivatives?	10
(ii) Who are the users and what are the purposes of use?	10
(iii) Enumerate the basic differences between cash and derivatives market.	10
Question-4 [May-2011-Old -4M]	11
What is the significance of an underlying in relation to a derivative instrument?	11
Question-5 [Nov-2008-Old -5M] [Nov-2004-Old -4M] [May-2006-Old -8M] [RTP-Nov-2020]	11
Distinguish between:.....	11
(i) Forward and Futures contracts.....	11
(ii) Intrinsic value and Time value of an option.....	11

Question-6 [May-2007-Old -4M]	12
(i) What are Stock futures?	12
(ii) What are the opportunities offered by Stock futures?	12
(iii) How are Stock futures settled?	12
Question-7 [Nov-2003-Old -4M]	13
Write short note on Marking to market.....	13
Question-8 [May-2010-Old -6M]	13
What are the reasons for stock index futures becoming more popular financial derivatives over stock futures segment in India?	13
Question-9 [MTP-Nov-2023]	14
"Investors can use Stock Index Futures to perform myriad tasks". Explain.	14
Question-10 [Nov-2010-Old -4M]	14
What are the features of Futures Contract?	14
Question-11 [Nov-2008-4M] [Nov-2011-4M] [Nov-2008-4M] [Nov-2008-4M] [May-2011-4M] [Nov-2008-4M] [May-2012-4M] [All are old Syll]	14
Write short notes on the following:	14
(a) Embedded derivatives.....	14
(b) Arbitrage operations	14
(c) Rolling settlement	14
Question-12 [Nov-2015-Old -4M]	15
Define the following Greeks with respect to options:	15
(i) Delta; (ii) Gamma; (iii) Vega; (iv) Rho	15
Question-13 [May-2015-Old-4M]	16
State any four assumptions of Black Scholes Model.	16
Question-14 [May-2014-Old -4M]	16
Write short notes on Factors affecting value of an option	16
Question-15 [RTP-May-2019-New]	17
Explain cash Settlement and Physical Settlement in Derivative contracts and their relative advantages and disadvantages.....	17
Question-16 [May-2023-4M]	17
"The commodity characteristic approach defines feasible commodities for derivatives trading based on an extensive list of required commodity attributes." What are the required attributes?	17
Question-16A [MTP-May-2022]	17
EXPLAIN necessary conditions of Commodity Derivatives	17
Question-17 [MTP-Nov-2023] [MTP-May-2023]	17
Explain briefly the various factors that affects the value of option.	17
Question-18 [MTP-May-2023]	18
"Investing in Stock Futures differs from investing in Equity Options in several ways". Explain. Answer:	18
Question-19 [MTP-May-2022]	18
"Commodity swaps are characterized by some peculiarities". EXPLAIN Answer:	18

EXOTIC OPTIONS

INTRODUCTION

1. Exotic options represent a distinct class of option contracts that differ in structure and features from traditional vanilla options, such as American and European options.
2. Unlike the clear expiration rules of vanilla options (American exercisable at any time, European only at maturity), exotic options often have hybrid characteristics, blending features of both American and European options, creating a middle ground between these two standard types.

EXOTIC VS. TRADITIONAL OPTION

- a. An exotic option can vary in terms of pay off and time of exercise.
- b. These options are more complex than vanilla options.
- c. Mostly Exotic options are traded in OTC market.

TYPES OF EXOTIC OPTIONS

1	Chooser Options	Provides the buyer the right, after a specified period, to decide whether the purchased option is a call or put option. Decision can be made within a specified period prior to the expiration of contracts.
2	Compound Options	Also known as split fee option or 'option on option.' Provides the right or choice (not obligation) to buy another option at a specific price on the expiry of the first maturity date. The underlying is an option, and the payoff depends on the strike price of the second option.
3	Barrier Options	Similar to plain vanilla call and put options, but the unique feature is that the contract becomes activated only if the price of the underlying reaches a certain level during a predetermined period.
4	Binary Options	Also known as 'Digital Option.' Guarantees a pre-decided payoff based on the occurrence of a specific event. Payoff is predetermined, and there is no payoff if the event does not occur.
5	Asian Options	Option contracts with payoffs determined by the average prices of the underlying over a predetermined period during the option's lifetime.
6	Bermuda Option	A compromise between European and American options. Exercise is restricted to certain dates or on expiration, similar to European options.
7	Basket Options	The value of the option depends on the value of a portfolio (basket) rather than a single underlying. Computed based on the weighted average of underlying in the basket.
8	Spread Options	Payoff depends on the difference between the prices of two underlying assets.
9	Look Back Options	Unlike other options with pre-decided exercise prices, the holder has the choice on the maturity date to choose the most favourable strike price based on the minimum and maximum prices of the underlying achieved during the option's lifetime.

CREDIT DERIVATIVES

Credit Derivatives is summation of two terms, Credit + Derivatives.

Plainly speaking the financial products are subject to following two types of risks:

- (a) Market Risk: Due to adverse movement of the stock market, interest rates and foreign exchange rates.
- (b) Credit Risk: Also called counter party or default risk, this risk involves non-fulfilment of obligation by the counter party.

While, financial derivatives can be used to hedge the market risk, credit derivatives emerged out to mitigate the credit risk. Accordingly, the credit derivative is a mechanism whereby the risk is transferred from the risk averse investor to those who wish to assume the risk.

COLLATERALIZED DEBT OBLIGATIONS (CDOs)

While in securitization the securities issued by SPV are backed by the loans and receivables the CDOs are backed by pool of bonds, asset backed securities, REITs, and other CDOs. Accordingly, it covers both Collateralized Bond Obligations (CBOs) and Collateralized Loan Obligations (CLOs).

TYPES OF CDOs

1	Cash Flow Collateralized Debt Obligations (Cash CDOs)	CDO backed by cash market debt or securities with low risk weight. Relies on collateral's risk weight and ability to generate sufficient cash to pay off the securities issued by SPV.
2	Synthetic Collateralized Debt Obligations	Similar to Cash Flow CDOs, but credit risk is transferred without actual asset transfer. Resembles hedge funds, where portfolio value depends on collateralized instruments' value. Economic effect is transferred through Credit Default Swap (CDS) or Credit Linked Notes (CLN). Used for risk hedging rather than balance sheet funding. Regulatory capital relief benefits. Three categories: (i) Unfunded - comprised only of CDS, (ii) Fully Funded - through issue of CLN, (iii) Partially Funded - partially through issue of CLN and partially through CDS.
3	Arbitrage CDOs	Involves capturing the spread between the return realized on collateral underlying the CDO and the cost of borrowing to purchase these collaterals. The issuer also collects fees for CDO management. Arises from acquiring relatively high-yielding securities with a large spread from the open market.

Risks involved in CDOs

1	Default Risk	Also known as 'credit risk,' it arises from the default of the underlying party to the instruments. Equity or junior tranche in the waterfall is most affected by this type of risk.
2	Interest Rate Risk	Also called 'Basis risk,' it arises due to different bases of interest rates. For example, the asset may be based on a floating interest rate, but the liability may be based on fixed interest rates. Techniques like swaps, caps, floors, collars, etc. can be used to mitigate interest rate risk. Difficult to fully manage.
3	Liquidity Risk	Arises from a mismatch in coupon receipts and payments. CDOs may face challenges in managing liquidity, impacting the ability to meet obligations promptly.
4	Prepayment Risk	Results from unscheduled or unexpected repayment of the principal amount underlying the security. Common in cases where assets have a fixed rate of interest and debtors have a call option.
5	Reinvestment Risk	Generic risk where the CDO manager may not find adequate opportunities to reinvest the proceeds when allowed for substitutions.
6	Foreign Exchange Risk	Applies when CDOs are comprised of debts and loans from countries other than the country of issue. In addition to other risks, CDOs are also subject to foreign exchange rate risk.

CREDIT DEFAULT SWAPS (CDSs)

It is a combination of following 3 words:

Credit: Loan given

Default: Non payment

Swap: Exchange of Liability or Risk

Main Features of CDS

- (a) CDS is a non-standardized private contract between the buyer and seller. Therefore, it is covered in the category of Forward Contracts.
- (b) They are normally not traded on any exchange and hence remain free from the regulations of the Governing Body.

- (c) The International Swap and Derivative Association (ISDA) publishes the guidelines and general rules used normally to carry out CDS contracts.
- (d) CDS can be purchased from a third party to protect itself from the default of borrowers.
- (e) Similarly, an individual investor who is buying bonds from a company can purchase CDS to protect his investment from insolvency of that company. Thus, this increases the level of confidence of the investor in the bonds purchased.
- (f) The cost or premium of CDS has a positive relationship with the risk attached to loans. Therefore, the higher the risk attached to bonds or loans, the higher will be the premium or cost of CDS.
- (g) If an investor buys a CDS without being exposed to the credit risk of the underlying bond issuer, it is called a "naked CDS."

Uses of Credit Default Swap

(a) Hedging:	The primary purpose of using CDS is to neutralize or reduce a risk to which CDS is exposed. By buying CDS, risk can be passed on to the CDS seller or writer.
(b) Arbitrage:	Involves buying a CDS and entering into an asset swap. For example, a fixed coupon payment of a bond is swapped against a floating interest stream.
(c) Speculation:	CDS can also be used for speculation to make a profit by exploiting price changes. For instance, a CDS writer assuming the risk of default will gain if credit risk does not materialize during the contract tenure or if compensation received exceeds potential payout.

Parties to CDS

i. Initial Borrowers (Reference Entity)	Also known as the 'reference entity,' these are entities that owe a loan or bond obligation. They are the subject of the credit protection provided by the CDS.
ii. Buyer (Investor)	The buyer of the CDS, also known as the 'investor.' The buyer makes regular payments to the seller for protection from default or a credit event involving the reference entity.
iii. Seller (Writer)	The seller or 'writer' of the CDS. This party makes payments to the buyer in the event of a credit event involving the reference entity. In return, it receives regular payments from the buyer of the CDS.

Settlement of CDS

(i) Physical Settlement	Involves the delivery of bonds or debts of the reference entity by the buyer to the seller. The seller pays the buyer the par value. For example, if the reference entity defaults, the seller pays the par value, and the buyer delivers bonds or debts of equivalent value to the seller.
(ii) Cash Settlement	In this arrangement, the seller pays the buyer the difference between the par value and the market price of a debt of the reference entity. For example, if the market value of bonds is 30%, the seller pays the buyer the difference (100% - 30%). In the event of default, the buyer receives cash instead of physical bonds.

HOW REAL OPTION IS DIFFERENT FROM FINANCIAL OPTION

Basis	Financial Options	Real Options
Underlying	Have underlying assets that are normally traded in the market i.e. shares, stocks, bonds, commodity etc.	Have underlying the projects that are not traded in the market.
Pay-off	In most of the cases it is specified in the contracts and hence is fixed.	It is estimated from the project cash flows and hence can be varied.
Exercise Period	Mostly the period of these options is short and can go maximum upto 1 year.	The period of these options mostly starts from the end of 1st year and higher than the Financial Options.

Approach	Since these options are normally traded in the market they are "Priced".	Since these options are used to make decisions, they are "Valued".
-----------------	--	--

List of options that may exist in a capital budgeting project:

Long call:

- Right to invest at some future date, at a certain price.
- Generally, any flexibility to invest, to enter a business, to expand a business .

Long put:

- Right to sell at some future date at a certain price.
- Right to abandon at some future date at zero or certain price.
- Generally, any flexibility to disinvest, to exit from a business.

Short call:

- Promise to sell if the counterparty wants to buy.
- Generally, any commitment to disinvest upon the action of another party.

Short put:

- Promise to buy if the counterparty wants to sell.
- Generally, any commitment to invest upon the action of another party.

VALUATION OF REAL OPTIONS

Following methods are employed for Valuation of Financial Options:

- (a) Binomial Model
- (b) Risk Neutral Method
- (c) Black-Scholes Model

TYPE OF REAL OPTIONS

A. Growth Options

Examples	• Investment in R&D activities • Heavy expenditure on advertisement • Initial investment in foreign market to expand business in future • Acquiring making rights • Acquisition of vacant plot with an intention to develop it in future.
Purposes of making such investments	• Defining the competitive position of firm hence it is called strategic investments. • Gaining knowledge about project's from profitability. • Providing the manufacturing and making flexibility to the firm.

B. Abandonment Option

1. Capital Budgeting projects are typically irreversible, leading to potential heavy losses if abandoned.
2. Abandoning a project is akin to an American Put Option, where the firm can choose to do so if the asset value surpasses the present value (PV) of continuing the project, providing flexibility in changing economic conditions.

C. Timing Option

1. Traditional capital budgeting involves either accepting or rejecting a project, implying a definitive decision to undertake or not undertake the project.
2. In real-life situations, a third option may arise: delaying the decision until later. This delay, akin to an American Call Option, allows for the consideration of better information or ideas that may become available later before committing to the investment.

WEATHER DERIVATIVES

Weather derivatives are financial instruments designed to help companies manage volumetric risk associated with adverse weather conditions. Unlike traditional derivatives focused on price risk, weather derivatives aim to hedge volume risk tied to changes in demand for goods influenced by weather measures. Introduced in 1997, the market expanded rapidly following the warm El Nino winter of 1997-1998.

These derivatives serve as an alternative to insurance, providing protection against a broad range of weather events, including more likely and less dramatic occurrences. In a weather derivative contract, the seller receives a premium from the buyer, agreeing to compensate the buyer in case of financial loss due to adverse weather conditions. If no adverse weather occurs, the seller profits from the premium received.

Challenges in Pricing Weather Derivatives

❖ Data:	The reliability of data is a significant challenge. Data availability varies from country to country and even among agencies within a country. Consistent and accurate data is crucial for pricing weather derivatives.
❖ Forecasting of Weather:	Various models can be used for short-term and long-term weather predictions, but predicting future weather behaviour is challenging due to dynamic factors. Forecasts often address seasonal levels but struggle with daily temperature levels.
❖ Temperature Modelling:	Temperature, a crucial factor in weather derivatives, remains relatively constant across different months. Finding a perfect and universal model for temperature is challenging. There is no model that can claim perfection and universality in capturing temperature variations.

ELECTRICITY DERIVATIVES

In India, the power market operates through long-term Power Purchase Agreements (PPAs) between state-owned distribution companies and power generators, lasting around 20-25 years due to the high capital and operational expenses involved in power projects. However, the electricity spot prices in India are volatile, influenced by factors such as market size, fuel supply changes, weather conditions, transmission congestion, and renewable energy generation variations.

To mitigate price risk exposure for market participants, including generators, buyers, and load serving entities, there is a need for hedging instruments. Derivative contracts linked to spot electricity prices can serve as effective tools for hedging against price volatility. These derivatives allow market participants to hedge against variations in spot electricity prices, enabling buyers to pay a fixed price, with the derivative instruments absorbing the impact of price fluctuations.

Vanilla Forms of Electricity Derivatives

- (i) Forwards
- (ii) Futures
- (iii) Swaps

ELECTRICITY FORWARDS

Electricity forward contracts involve the obligation to buy or sell a fixed amount of electricity at a predetermined contract price (forward price) at a specified future time, known as maturity or expiration. Similar to financial and commodity forward contracts, electricity forwards are customized supply agreements where the buyer commits to taking power, and the seller commits to supplying it. The payoff of an electricity forward contract, promising delivery of one unit at price F in the future (time T), is given by the formula: $\text{Payoff} = (\text{Spot Price at } T - \text{Forward Price})$.

However, unlike other financial and commodity forward contracts, electricity forwards are unique because the underlying commodity (electricity) varies at different times. The settlement price (ST) is typically determined based on the average electricity price over the delivery period at the maturity date (T). This distinctive characteristic reflects the dynamic nature of electricity as a commodity.

ELECTRICITY FUTURES

Electricity futures are standardized contracts specifying the delivery of a certain amount of electricity at a predetermined price and time in the future. Sellers can sell a portion of their future production, while consumers can secure a specific amount of needed power. These futures contracts, like other financial futures, are traded on organized exchanges, providing transparency, liquidity, and reduced transaction costs compared to over-the-counter electricity forwards.

The key difference between electricity futures and forwards lies in the delivery quantity, with futures typically involving smaller amounts. Electricity futures are settled through financial payments rather than physical delivery, further reducing transaction costs. Strict margin requirements on exchanges minimize credit risks and monitoring costs. Daily payment of gains and losses in electricity futures contrasts with the lump-sum settlement at maturity in forward contracts, reducing credit risks.

While electricity futures offer advantages such as market consensus, price transparency, and reduced costs, they have limitations related to rigidity in contract specifications and limited transaction quantities.

ELECTRICITY SWAP

Electricity swaps are financial contracts allowing holders to pay a fixed price for underlying electricity, irrespective of the floating electricity price, or vice versa, over the contracted time. They offer short-to-medium term price certainty for up to a couple of years by referencing a fixed quantity of power to a variable spot price at a generator's or consumer's location. Similar to financial swaps, electricity swaps can be viewed as a series of electricity forwards with multiple settlement dates and identical forward prices.

Another type is Electricity Locational Basis Swaps, where the holder agrees to pay or receive the difference between a specified futures contract price and another locational spot price, providing a fixed cash flow at the transaction time. These swaps effectively hedge risks based on price differences between power prices at two different physical locations.

DERIVATIVE MISHAPS AND LESSONS

From the above discussion it can be seen that while Derivatives can be used for hedging purpose, simultaneously they can also be used for speculation purpose also. Due to this attribute of Financial Derivatives, legendary investor Warren Buffet believes that the derivatives are financial weapons of mass destruction. Though there may be many example/cases where derivatives have proven very fatal for various organizations and even brought them to their knees, but we shall keep our discussion limited to some of infamous cases which are as follows:

Case	
Orange County's Case	- Treasurer Robert Citron speculates on derivatives despite lacking financial background. - Utilizes yield curve play strategy with leverage, initially yielding profits. - Shift in Federal Reserve policy in 1994 leads to losses, margin calls, and bankruptcy. - Citron resigns, faces legal consequences, and Orange County declares bankruptcy.
Barings Bank's Case	- Nick Leeson engages in low-risk arbitrage, later switches to speculative trading. - Conceals losses in back office, influences staff. - Massive losses in 1995 due to unexpected events, earthquake in Japan. - Barings Bank becomes bankrupt, ING acquires it for £1.
P&G and Gibson Greetings' Case	- Banker Trust sells complex derivative structures to P&G and Gibson Greetings. - Misleads clients about product suitability, resulting in substantial losses for both companies. - P&G and Gibson Greetings sue Banker Trust, settling out of court.

Lessons from Derivative Mishaps	
1. Understanding Derivatives	- Avoid buying derivatives that are not understood. - Conduct in-house valuation to prevent misinformation.
2. Treasury Department Oversight	- Exercise due diligence before turning the Treasury Department into a profit centre. - Avoid linking compensation to profit, preventing excessive risk-taking.
3. Risk Limit Specification	- Clearly define and strictly enforce risk limits for traders. - Monitor positions regularly and obtain daily reports to prevent overtrading.
4. Separation of Offices	- Maintain separation between front, middle, and back offices. - Clearly define and follow the roles and functions of each office.
5. Preventing Speculation	- Ensure that hedgers do not become speculators. - Define clear risk limits and conduct thorough risk analysis before engaging in trading strategies.
6. Stress Tests and Scenario Analysis	- Perform stress tests, scenario analysis, and simulation tests to anticipate and prepare for unforeseen events. - Consider historical data and simulate various scenarios to prepare for unexpected situations.

Question-1 [May-2010-Old-4M]

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:
- $$\text{Index Value} = \text{Index on Previous Day} \times \frac{\text{Free Float market capitalization for current day}}{\text{Free Float Market Capitalization of the previous day}}$$
- It should also be noted that Indices may also be calculated using the price weighted method. Here the share the share price 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-2 [Nov-2003-Old -4M] [Nov-2007-Old -5M]*Write short note on Green shoe option.***Answer:****Green Shoe Option:**

⇒ Green shoe Option is an option which provides Rights to issue additional share upto certain quantity over initial offer. In other word, it provides rights to the underwriter for new issue if demand is high. 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 limited ideas. As per SEBI guidelines public issue can accept upto 15 per cent of the offer made to public. In certain situations, the green-shoe option can even be more than 15 per cent.

⇒ Examples:

IDBI had come-up earlier with their Flexi bonds (Series 4 and 5). This is a debt-instrument. Each of the series was initially floated for Rs. 750 crores. SEBI had permitted IDBI to retain an excess of an equal amount of Rs. 750 crores.

ICICI had launched their first tranche of safety bonds through unsecured redeemable debentures of Rs. 200 crores, with a green shoe option for an identical amount.

More recently, Infosys Technologies has exercised the green shoe option to purchase upto 7,82,000 additional ADSs representing 3,91,000 equity shares. This offer initially involved 5.22 million depository shares, representing 2.61 million domestic equity shares

Question-3 [Nov-2007-Old -8M]*(i) What are derivatives?**(ii) Who are the users and what are the purposes of use?**(iii) Enumerate the basic differences between cash and derivatives market.***Answer:**

(i) Derivative is a product/contract 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.

(ii)

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

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

In cash market tangible assets are traded whereas in derivate markets contracts based on tangible or intangibles assets likes index or rates are traded.

(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 riskier 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-4 [May-2011-Old -4M]

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 of the underlying is higher than the contract price the buyer makes a profit. If the price is lower, the buyer suffers a loss.

Question-5 [Nov-2008-Old -5M] [Nov-2004-Old -4M] [May-2006-Old -8M] [RTP-Nov-2020]

Distinguish between:

(i) Forward and Futures contracts.

(ii) Intrinsic value and Time value of an option.

Answer:

(i) Forward and Future Contracts:

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 Exchange	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 Cost	Cost of forward contracts is based on bid – ask spread.	Futures contracts entail brokerage fees for buy and sell orders.
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 Risks	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.

(ii) Intrinsic value and the time value of An Option:

Intrinsic value of an option and the time value of an option are primary determinants of an option's price. By being familiar with these terms and knowing how to use them, one will find himself in a much better position to choose the option contract that best suits the particular investment requirements.

Intrinsic value is the value that any given option would have if it were exercised today. This is defined as the 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 $CP - X$ is the option's intrinsic value. If the strike price is greater than the current stock price, then the intrinsic value of the option is zero – it would not be worth anything if it were to be exercised today. An option's intrinsic value can never be below zero. To determine the intrinsic value of a put option, simply reverse the calculation to $X - CP$.

Example: Let us assume Wipro Stock is priced at Rs105/-. In this case, a Wipro 100 call option would have an intrinsic value of $(Rs105 - Rs100 = Rs5)$. However, a Wipro 100 put option would have an intrinsic value of zero $(Rs100 - Rs105 = -Rs5)$. Since this figure is less than zero, the intrinsic value is zero. Also, intrinsic value can never be negative. On the other hand, if we are to look at a Wipro put option with a strike price of Rs120. Then this particular option would have an intrinsic value of Rs15 $(Rs120 - Rs105 = Rs15)$.

Time Value:

This is the second component of an option's price. It is defined as any value of an option other than the intrinsic value. From the above example, if Wipro is trading at Rs105 and the Wipro 100 call option is trading at Rs7, then we would conclude that this option has Rs2 of time value $(Rs7 \text{ option price} - Rs5 \text{ intrinsic value} = Rs2 \text{ time value})$. Options that have zero intrinsic value are comprised entirely of time 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 upto the expiration date. This component may be regarded as the Insurance premium of the option. This is also known as "Extrinsic value." Time value decays over time. In other words, 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-6 [May-2007-Old -4M]

(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 underpriced 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) Up to March 31, 2002, stock futures were settled in cash. The final settlement price is the closing price of the underlying stock. From April 2002, stock futures are settled by delivery, i.e., by merging derivatives position into cash segment.

Question-7 [Nov-2003-Old -4M]

Write short note on Marking to market.

Answer:

Marking to market:

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

Suppose on 1st day we take a long position, say at a price of Rs 100 to be matured on 7th day. Now on 2nd day if the price goes up to Rs 105, the contract will be repriced at Rs 105 at the end of the trading session and profit of Rs 5 will be credited to the account of the buyer. This profit of Rs 5 may be drawn and thus cash flow also increases. This marking to market will result in three things – one, you will get a cash profit of Rs 5; second, the existing contract at a price of Rs 100 would stand cancelled; and third you will receive a new futures contract at Rs 105. In essence, the marking to market feature implies that the value of the futures contract is set to zero at the end of each trading day.

Question-8 [May-2010-Old -6M]

What are the reasons for stock index futures becoming more popular financial derivatives over stock futures segment in India?

Hint: Stock Index Future Vs. Stock Future

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-9 [JMT-Nov-2023]

"Investors can use Stock Index Futures to perform myriad tasks". Explain.

Hint: Advantages/Uses of Stock Index Future

Answer:

Investors can use stock index futures to perform myriad tasks. Some common uses are:

- (1) Investors commonly use stock index futures to change the weightings or risk exposures of their investment portfolios.
- (2) Stock index futures also allow investors to separate market timing from market selection decisions.
- (3) Investors can also make money from stock index futures through index arbitrage, also referred to as program trading as it is carried out through use of computers.
- (4) Investors often use stock index futures to hedge the value of their portfolios. Provide hedging or insurance protection for a stock portfolio in a falling market. To implement a hedge, the instruments in the cash and futures markets should have similar price movements. Also, the amount of money invested in the cash and futures markets should be the same.
- (5) Stock index futures add flexibility to his or her portfolio as a hedging and trading instrument.
- (6) Create the possibility of speculative gains using leverage. Because a relatively small amount of margin money controls a large amount of capital represented in a stock index contract, a small change in the index level might produce a profitable return on one's investment if he or she is right about the market's direction.
- (7) Maintain one's stock portfolio during stock market corrections. One may not need "insurance" for all the time, but there are certain times when one would like less exposure to stocks. Yet, one doesn't want to sell off part of a stock portfolio that has taken him or her a long time to put together and looks like a sound, long-term investment program.
- (8) One of the major advantages of futures markets, in general, is that one can sell contracts as readily as he or she can buy them and the amount of margin required is the same. Mutual funds do not specialize in bear market approaches by short selling stocks but, and also it is not possible for individuals to short sell stocks in a falling market to make money.

Question-10 [Nov-2010-Old -4M]

What are the features of Futures Contract?

Answer:

Future contracts can be characterized by: -

- (a) These are traded on organized exchanges (i.e. Stock Exchange).
- (b) Standardized contract terms like the underlying assets, the time of maturity and the manner of maturity etc.
- (c) Associated with clearing house to ensure smooth functioning of the market.
- (d) Margin requirements and daily settlement to act as further safeguard i.e., marked to market.
- (e) Existence of regulatory authority.
- (f) 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 of a transaction, provides a mechanism that guarantees the honoring of the contract and ensuring very low level of default.

Question-11 [Nov-2008-4M] [Nov-2011-4M] [Nov-2008-4M] [Nov-2008-4M] [May-2011-4M] [Nov-2008-4M] [May-2012-4M] [All are old Syll]

Write short notes on the following:

- (a) *Embedded derivatives*
- (b) *Arbitrage operations*
- (c) *Rolling settlement.*

Answer:

- (a) **Embedded Derivatives:** A derivative is defined as a contract that has all the following characteristics:
 - Its value changes in response to a specified underlying, e.g. an exchange rate, interest rate or share price;
 - It requires little or no initial net investment;

- It is settled at a future date;

- The most common derivatives are currency forwards, futures, options, interest rate swaps etc.

An embedded derivative is a derivative instrument that is embedded in another contract - the host contract. The host contract might be a debt or equity instrument, a lease, an insurance contract or a sale or purchase contract. Derivatives require to be marked-to market through the income statement, other than qualifying hedging instruments. This requirement on embedded derivatives are designed to ensure that mark-to-market through the income statement cannot be avoided by including - embedding - a derivative in another contract or financial instrument that is not marked-to market through the income statement.

An embedded derivative can arise from deliberate financial engineering and intentional shifting of certain risks between parties. Many embedded derivatives, however, arise inadvertently through market practices and common contracting arrangements. Even purchase and sale contracts that qualify for executory contract treatment may contain embedded derivatives. An embedded derivative causes modification to a contract's cash flow, based on changes in a specified variable.

(b) **Arbitrage Operations:** Arbitrage is the buying and selling of the same commodity in different markets. A number of pricing relationships exist in the foreign exchange market, whose violation would imply the existence of arbitrage opportunities - the opportunity to make a profit without risk or investment. These transactions refer to advantage derived in the transactions of foreign currencies by taking the benefits of difference in rates between two currencies at two different centers at the same time or of difference between cross rates and actual rates.

For example, a customer can gain from arbitrage operation by purchase of dollars in the local market at cheaper price prevailing at a point of time and sell the same for sterling in the London market. The Sterling will then be used for meeting his commitment to pay the import obligation from London.

(c) **Rolling Settlement:** SEBI introduced a new settlement cycle known as the 'rolling settlement cycle'. This cycle starts and ends on the same day and the settlement take place on the 'T+5' day, which is 5 business days from the date of the transaction. Hence, the transaction done on Monday will be settled on the following Monday and the transaction done on Tuesday will be settled on the following -Tuesday and so on. Hence unlike a BSE or NSE weekly settlement cycle, in the rolling settlement cycle, the decision has to be made at the conclusion of the trading session, on the same day, rolling settlement cycles were introduced in both exchanges on January 12, 2000. Internationally, most developed countries follow the rolling settlement system. For instance both the US and the UK follow a roiling settlement (T+3) system, while the German stock exchanges follow a (T+2) settlement cycle.

Question-12 [Nov-2015-Old -4M]

Define the following Greeks with respect to options:

(i) Delta; (ii) Gamma; (iii) Vega; (iv) Rho

Answer:

(i) Delta:

It is the degree to which an option price will move given a small change in the underlying stock price. For example, an option with a delta of 0.5 will move half a rupee for every full rupee movement in the underlying stock.

The delta is often called the hedge ratio i.e. if you have a portfolio short 'n' options (e.g. you have written n calls) then n multiplied by the delta gives you the number of shares (i.e. units of the underlying) 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

(ii) Gamma:

It measures how fast the delta changes for small changes in the underlying stock price i.e. the delta of the delta. If you are hedging a portfolio using the delta-hedge technique described under "Delta", then you will want to keep gamma as small as possible, the smaller it is the less often you will have to adjust the hedge to maintain a

delta neutral position. 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.

[Nov-2023]

(iii) Vega:

Sensitivity of option value to change in volatility. Vega indicates an absolute change in option value for a one percentage change in volatility.

[Nov-2023]

(iv) 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.

Question-13 [May-2015-Old-4M]

State any four assumptions of Black Scholes Model.

Answer:

The model is based on a normal distribution of underlying asset returns. The following assumptions accompany the model:

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-14 [May-2014-Old -4M]

Write short notes on Factors affecting 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. You simply input all the variables (stock price, time, interest rates, dividends and future volatility), and you get an answer that tells you what an option should be worth. 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.

With stocks, time is a trader's ally as the stocks of quality companies tend to rise over long periods of time. But time is the enemy of the options buyer. If days pass without any significant change in the stock price, there is a decline in the value of the option. Also, the value of an option declines more rapidly as the option approaches the expiration day. That is good news for the option seller, who tries to benefit from time decay, especially during that final month when it occurs most rapidly.

(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-

Another feature which affects the value of an Option is the time value of money. The greater the interest rates, the present value of the future exercise price is less.

Question-15 [RTP-May-2019-New]

Explain cash Settlement and Physical Settlement in Derivative contracts and their relative advantages and disadvantages.

Answer:

The physical settlement in case of derivative contracts means that underlying assets are actually delivered on the specified delivery date. In other words, trades will have to take delivery of the shares against position taken in the derivative contract.

In case of cash settlement, the seller of the derivative contract does not deliver the underlying asset but transfers the Cash. It is similar to Index Futures where the purchaser, who wants to settle the contract in cash, will have to pay or receive the difference between the Spot price of the contract on the settlement date and the Futures price decided beforehand since it is impossible to affect the physical ownership of the underlying securities.

The main advantage of cash settlement in derivative contract is high liquidity because of more derivative volume in cash segment. Moreover, the underlying stocks in derivative contracts has constricted bid-ask spreads. And, trading in such stocks can be affected at lower impact cost. If the stock is liquid, the impact cost of bigger trades will be lower.

Further, an adverse move can be hedged. For example, the investors can take a covered short derivative position by selling the future while still holding the underlying security.

Also, 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. So, this leads to some arguments in favour of physical settlement in derivative contract. 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.

However, one 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-16 [May-2023-4M]

"The commodity characteristic approach defines feasible commodities for derivatives trading based on an extensive list of required commodity attributes." What are the required attributes?

Question-16A [MTP-May-2022]

EXPLAIN necessary conditions of Commodity Derivatives

Answer:

The following attributes are considered crucial for qualifying for the derivatives trade:

- (1) A commodity should be durable and it should be possible to store it;
- (2) Units must be homogeneous;
- (3) The commodity must be subject to frequent price fluctuations with wide amplitude; supply and demand must be large;
- (4) Supply must flow naturally to market and there must be breakdowns in an existing pattern of forward contracting.

Question-17 [MTP-Nov-2023] [MTP-May-2023]

Explain briefly the various factors that affects the value of option.

Answer:

There are a number of different mathematical formulae, or models, that are designed to compute the fair value of an option. You simply input all the variables (stock price, time, interest rates, dividends and future volatility), and you get an answer that tells you what an option should be worth. Here are the general effects the variables have on an option's price:

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

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

With stocks, time is a trader's ally as the stocks of quality companies tend to rise over long periods of time. But time is the enemy of the options buyer. If days pass without any significant change in the stock price, there is a decline in the value of the option. Also, the value of an option declines more rapidly as the option approaches the expiration day. That is good news for the option seller, who tries to benefit from time decay, especially during that final month when it occurs most rapidly.

- (iii) Volatility in Stock Prices: Volatility can be understood via a measure called Statistical (sometimes called historical) Volatility, or SV for short. SV is a statistical measure of the past price movements of the stock; it tells you how volatile the stock has actually been over a given period of time.
- (iv) Interest Rate- Another feature which affects the value of an Option is the time value of money. The greater the interest rates, the present value of the future exercise price are less.

Question-18 [MTP-May-2023]

"Investing in Stock Futures differs from investing in Equity Options in several ways". Explain.

Answer:

Investing in stock futures differs from investing in equity options contracts in several ways:

- Nature: In options, the buyer of the options has the right but not the obligation to purchase or sell the stock. However while going in for a long futures position, the investor is obligated to square off his position at or before the expiry date of the futures contract.
- Movement of the Market: Options traders use a mathematical factor, the delta that measures the relationship between the options premium and the price of the underlying stock. At times, an options contract's value may fluctuate independently of the stock price. In contrast, the future contract will much more closely follow the movement of the underlying stock.
- The Price of Investing: When an options investor takes a long position, he or she pays a premium for the contract. The premium is often called a sunk cost. At expiration, unless the options contract is in the money, the contract is worthless and the investor has lost the entire premium. Stock future contracts require an initial margin deposit and a specific maintenance level of cash for mark to market margin.

Question-19 [MTP-May-2022]

"Commodity swaps are characterized by some peculiarities". EXPLAIN

Answer:

Yes, commodity swaps are characterized by some peculiarities as following are some factors that we must account for:

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

Some of these factors must be extended to the pricing and hedging of interest rate swaps, currency swaps and equity swaps as well. The idiosyncratic nature of the commodity markets refers more to the often limited number of participants in these markets (naturally begging questions of liquidity and market information), the unique factors driving these markets, the interrelations with cognate markets and the individual participants in these markets.

Chapter - 9

FOREIGN EXCHANGE EPOSURE & RISK MANAGEMENT

Contents

Question No. – 2 [May-2000-Old-8M] [Nov-1996-Old -4M].....	3
Outland Steel has a small but profitable export business. Contracts involve substantial delays in payment, but since the company has had a policy of always invoicing in dollars, it is fully protected against changes in exchange rates. More recently the sales force has become unhappy with this, since the company is losing valuable orders to Japanese and German firms that are quoting in customers' own currency. How will you, as Finance Manager, deal with the situation?	3
Mention any four of the tools available to cover Exchange Rate Risk.	3
Question No. – 2 [CMA-Dec-2004-Old-6M] [Nov-2008-Old -5M].....	4
Define Arbitrage Operation. Explain with example the types of Arbitrage.	4
Write short notes on "Arbitrage operations".	4
Question No. – 3 [May-2012-Old -4M]	4
Write short notes on "Meaning and Advantages of Netting"	4
Question: [MTP-May-2022]	4
"Netting helps in minimizing the total value of intercompany fund flows". EXPLAIN.	4
Question No. – 4 [May-2012-Old -4M] [RTP-Nov-Old -2016] [TYKQ-SM-New] [May-Old-2018].....	5
Write short notes on "Nostro, Vostro and Loro Accounts"	5
Question No. – 5 [Nov-2011-Old -4M].....	5
Write short notes on leading and lagging	5
Question No. -6 [May-2011-Old -4M] [RTP-Nov-2019-New]	6
What is the meaning of: (i) Interest Rate Parity and (ii) Purchasing Power Parity?	6
Briefly discuss the concept of Purchasing power Parity	6
Question No. - 7 [May-2011-Old -4M]	6
Explain the significance of LIBOR in international financial transactions.	6
Question No. – 8 [CMA-Dec-2002-Old-4M] [CMA-Dec-2004-Old-8M] [CMA-June-2006-Old-7M] [Nov-2007-Old -3M] [May-2016-Old -4M] [Nov-2014-4M] [TYKQ-SM-New]	7
"Operations in foreign exchange market are exposed to a number of risks." Discuss.....	7
Briefly explain the major types of currency exposures.	7
What do you understand by Foreign Exchange Risk? State the different types of Foreign Exchange exposure?	7
What are the risks to which foreign exchange transactions are exposed?	7

Question No. -9 [Nov-1996-Old -4M].....	7
Explain the term “Foreign Exchange Rate Risk”.....	7
Write short notes on “Cross Currency Roll Over Contracts”.....	8
Question No. -11 [Nov-1997-Old -5M] [CMA-Dec-2007-Old -4M].....	8
Write short notes on Forward as hedge instrument.....	8
Question No. -12 [MTP-Nov-2021].....	8
All dealings in Foreign Exchange effect the Exchange Position whether delivery has taken place or not, but Cash Position is effected only when actual delivery has taken place. Explain.....	8
Question No. -13.....	8
What are the roles of SWIFT in Foreign Exchange?	8
Question No. -14.....	9
List the benefits of Payment Gateway.....	9
Question No. -15.....	9
What are the challenges in the growth of Payment Gateway?	9
Question No. -16.....	9
Explain the popular derivative products:	9

Question No. – 1 [Nov-2022-4M]

Write a short note on Money Market Hedging.

Hint: point (ii) below only

Question No. – 2 [May-2000-Old-8M] [Nov-1996-Old -4M]

Outland Steel has a small but profitable export business. Contracts involve substantial delays in payment, but since the company has had a policy of always invoicing in dollars, it is fully protected against changes in exchange rates. More recently the sales force has become unhappy with this, since the company is losing valuable orders to Japanese and German firms that are quoting in customers' own currency. How will you, as Finance Manager, deal with the situation?

OR

Mention any four of the tools available to cover Exchange Rate Risk.

Answer

- It is not good to lose customer because of practice of invoicing in home currency (i.e. dollar) here dollar is home currency because question written outland steel is fully protected against changes in exchange rate. It is possible only when dollar is home currency.
- In this situation finance manager can allow to quote in customer's currency (i.e. foreign currency) and hedge foreign currency risk by using any of following techniques:
 - (i) Forward contract:
 - (ii) Money market hedge
 - (iii) Currency Future
 - (iv) Currency option

(i) Forward Contract:

Contract entered today in OTC market at a specified rate for future settlement is known as forward Contract. It doesn't matter what will be exchange rate on settlement date, contracted rate will be applied for purchase/sale of foreign currency. As there is no uncertainty involved for applicable exchange rate, it can be used as measure for hedging.

(ii) Money Market Hedge:

At its simplest, a money market hedge is an agreement to exchange a certain amount of one currency for a fixed amount of another currency, at a particular date. For example, suppose a business owner in India expects to receive 1 Million USD in six months. This Owner could create an agreement now (today) to exchange 1 Million USD for INR at roughly the current exchange rate. Thus, if the USD dropped in value by the time the business owner got the payment, he would still be able to exchange the payment for the original quantity of U.S. dollars specified.

Advantages of Money Market Hedging:

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

Disadvantages of Money Market Hedging:

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

(iii) Currency Future:

Currency future is a contract entered today in exchange to purchase/sale foreign currency at specified rate after specified period. As there is no uncertainty involved for applicable exchange rate, it can be used as measure for hedging.

(iv) Currency Option:

It provides rights to buy or sale foreign currency at specified rate on specified date. Call option provides rights to buy a currency while Put option provides rights to sale a currency. As it provides "rights" but "not obligation", there is no uncertainty for future date. Hence currency option can also be used as measure for hedging.

Question No. – 2 [CMA-Dec-2004-Old-6M] [Nov-2008-Old -5M]

Define Arbitrage Operation. Explain with example the types of Arbitrage.

OR,

Write short notes on "Arbitrage operations".

Answer:

Act to earn risk free profit is known as Arbitrage.

● Arbitrage may arise from:

- (i) Simultaneously buying and selling same commodity or Security or currency in different market at different price, or
- (ii) Borrowing at lower rate from one country and depositing at higher rate in another country.

There are two types of arbitrage in foreign currency:

(i) Geographical Arbitrage:

- ⇒ Geographical Arbitrage arises when there is mismatch in exchange rate of two currencies in two markets. It means when there is different rate in different market for same currencies.
- ⇒ To earn arbitrage profit purchase one currency at lower rate and sale same currency at higher rate.
- ⇒ Example: Suppose, In Mumbai, Spot rate: \$1 = ₹60.00; and
In New York, Spot rate: \$1 = ₹60.25

In this case, Arbitrage of ₹0.25 (i.e. ₹60.25 – 60.00) is possible by purchasing dollar from Mumbai and Selling dollar in New York.

(ii) Cover Interest Arbitrage:

- ⇒ Cover Interest Arbitrage arises when there are mismatch in Spot exchange rate; Forward exchange rate and interest rate of two countries. In other word we can say it is possible when exchange rates and interest rates are not based on Parity (i.e. IRPT).
- ⇒ To earn arbitrage profit, (a) borrow from one country; (b) convert it at spot exchange rate; (c) deposit in another country; (d) convert another currency into first currency using forward exchange rate and (e) Repay first borrowing. Surplus remained after repayment is arbitrage profit.
- ⇒ Example: Suppose, Spot rate: \$1 = ₹60.00; and
Forward rate: \$1 = ₹60.00
Interest rate in India = 10%
Interest rate in USA = 8%

Above exchange rates and interest rates are not based on Interest rate parity. Hence one can earn arbitrage by taking loan from USA and depositing in India.

Question No. – 3 [May-2012-Old -4M]

Write short notes on "Meaning and Advantages of Netting"

Question: [MTP-May-2022]

"Netting helps in minimizing the total value of intercompany fund flows". EXPLAIN.

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

Question No. – 4 [May-2012-Old -4M] [RTP-Nov-Old -2016] [TYKQ-SM-New] [May-Old-2018]

Write short notes on “Nostro, Vostro and Loro Accounts”

Answer:

In interbank transactions, foreign exchange is transferred from one account to another account and from one centre to another centre. Therefore, the banks maintain three types of current accounts in order to facilitate quick transfer of funds in different currencies.

These accounts are Nostro, Vostro and Loro accounts meaning “our”, “your” and “their”.

(i) Nostro Account:

A domestic bank's foreign currency account maintained in a foreign country and is known as Nostro Account or “our account with you”.

For example, An Indian bank's Swiss franc account with a bank in Switzerland.

(ii) Vostro Account:

Vostro account is the local currency account maintained by a foreign bank/branch. It is also called “your account with us”.

For example, Indian rupee account maintained by a bank in Switzerland with a bank in India.

(iii) Loro Account:

The Loro Account is a Current Account Maintained by one Domestic Bank on behalf of another domestic bank in foreign bank in foreign currency. It is also called “Our account of their money with you”.

For example, SBI bank's (an Indian Bank) current Account in Swiss bank referred by PNB (another Indian Bank) for its own transaction is called Loro Account for PNB. Basically it is account of SBI referred by PNB.

Question No. – 5 [Nov-2011-Old -4M]

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: -

(1) Hedging foreign exchange risk:

A company can lead payments required to be made in a currency that is likely to appreciate. For example, a company has to pay \$100000 after one month from today. The company apprehends the USD to appreciate. It can make the payment now. Leading involves a finance cost i.e. one month's interest cost of money used for purchasing \$100000.

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 (i) likely movement in exchange rate (ii) interest cost and (iii) discount (if any).

(2) Shifting the liquidity by modifying the credit terms between inter-group entities:

For 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 No. -6 [May-2011-Old -4M] [RTP-Nov-2019-New]

What is the meaning of: (i) Interest Rate Parity and (ii) Purchasing Power Parity?

OR

Briefly discuss the concept of Purchasing power Parity

Answer:

(i) Interest Rate Parity (IRP):

- ⇒ Interest rate parity is a theory which states that '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 (means foreign exchange risk is covered) is not possible, because any interest rate advantage in the foreign country will be offset by the discount on the forward rate.
- ⇒ In other way we can say arbitrage is not possible because gain from interest rate will be equal to loss from exchange rate fluctuation.
- ⇒ The Covered Interest Rate Parity equation is given by: $(1 + r_D) = \frac{SR}{FR} (1 + r_F)$
 Where, r_D = Domestic currency risk free rate.
 r_F = Foreign currency risk free rate
 FR = Forward exchange rate for 1 unit of FC (i.e. 1 being attached with Foreign currency)
 SR = Spot exchange rate for 1 unit of FC

(ii) Purchasing Power Parity (PPP):

Purchasing Power Parity theory focuses on the 'inflation – exchange rate' relationship. There are two forms of PPP theory: -

(a) Absolute form [Also called Law of One Price]:

It 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.

(b) Relative form:

It is an 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.' However, 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 using the inflation rates in domestic and foreign countries is as follows:

$$(1 + i_D) = \frac{SR}{FR} (1 + i_F)$$

Where, FR = Forward Rate of foreign Currency and

SR = Spot Rate of foreign currency

i_D = Domestic Inflation Rate

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.

Question No. - 7 [May-2011-Old -4M]

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:

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

Question No. – 8 [CMA-Dec-2002-Old-4M] [CMA-Dec-2004-Old-8M] [CMA-June-2006-Old-7M] [Nov-2007-Old-3M] [May-2016-Old-4M] [Nov-2014-4M] [TYKQ-SM-New]

“Operations in foreign exchange market are exposed to a number of risks.” Discuss.

OR,

Briefly explain the major types of currency exposures.

OR,

What do you understand by Foreign Exchange Risk? State the different types of Foreign Exchange exposure?

OR,

What are the risks to which foreign exchange transactions are exposed?

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. When exchange rate fluctuates, assets, liabilities, revenues, expenses that have been expressed in foreign currency will result in either foreign exchange gain or loss. A 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 favorable 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 No. -9 [Nov-1996-Old -4M]

Explain the term “Foreign Exchange Rate Risk”.

Answer:

Foreign Exchange Rate Risk:

- ⇒ This risk relates to the uncertainty attached to the exchange rates between two currencies. For example, the amount borrowed in foreign currency is to be repaid in the same currency or in some other acceptable currency.
- ⇒ Thus if the foreign currency becomes stronger than (say) Indian rupees, the Indian borrower has to repay the loan in terms of more rupees than the rupees he obtained by way of loan.
- ⇒ The extra rupee he pays is not due to an increase in interest rate but because of unfavorable exchange rate. Conversely he will gain if the rupee is stronger.
- ⇒ The fluctuation in the exchange rate causes uncertainty and this uncertainty gives rise to exchange rate risk.

Question No. -10 [May-1997-Old -5M]

Write short notes on "Cross Currency Roll Over Contracts".

Answer:

Cross Currency Roll over Contacts:

- ⇒ Cross Currency Roll Over contracts is hedging technique used to hedge foreign currency fluctuation risk of amount payable or receivable beyond 6 months.
- ⇒ Forward contract for a period more than 6 months cannot be entered. Hence, initially obtain cover with 6 months' forward contract and later on extended for further period of six months and so on.
- ⇒ Roll over charge or benefit depends on forward premium or discount, which in turn, is a function of interest rate differentials between US dollar and the other currency.
- ⇒ Under the Roll Over Contract the basic rate of exchange is fixed but loss or gain arises at the time of each Roll over depending upon the market conditions.

Question No. -11 [Nov-1997-Old -5M] [CMA-Dec-2007-Old -4M]

Write short notes on Forward as hedge instrument.

Answer:

Forward as hedge instrument:

- ⇒ International transactions both trade and financial give rise to currency exposures. A currency exposure if left unmanaged leaves a corporate open to profits or losses arising on account of fluctuations in currency ratio. One way in which corporate can protect itself from effects of fluctuations in currency rates is through buying or selling in forward markets.
- ⇒ A forward transaction is a transaction requiring delivery at future date of a specified amount of one currency for a specific amount of another currency.
- ⇒ The exchange rate is determined at the time of entering into the contract but the payment and delivery takes place on maturity.
- ⇒ Corporate use forwards to hedge themselves against fluctuations in currency price that would have a significant impact on their financial position.
- ⇒ Banks use forward to offset the forward contracts entered into with non-bank customers.

Question No. -12 [MTP-Nov-2021]

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

Answer:

Yes, this statement is correct because while Exchange Position is referred to total of purchases or sale of commitment of a bank to purchase or sale foreign exchange whether actual delivery has taken place or not. In other words, all transactions for which bank has agreed with counter party are entered into exchange position on the date of the contract.

While Cash Position is outstanding balance (debit or credit) in bank's Nostro account. Since all foreign exchange dealings of bank are routed through Nostro account it is credited for all purchases and debited for sale by bank.

Therefore, all transactions effecting Cash position will affect Exchange Position not vice versa.

Question No. -13

What are the roles of SWIFT in Foreign Exchange?

Answer:

The SWIFT connects various financial institutions in more than 200 countries. The SWIFT plays an important role in Foreign Exchange dealings because of the following reasons:

- In addition to validation statements and documentation it is a form of quick settlement as messaging takes place within seconds.
- Because of security and reliability helps to reduce Operational Risk.
- Since it enables its customers to standardise transaction it brings operational efficiencies and reduced costs.
- It also ensures full backup and recovery system.
- Acts as a catalyst that brings financial agencies to work together in a collaborative manner for mutual interest.

Question No. -14

List the benefits of Payment Gateway.

Answer:

A Payment Gateway provides multiple benefits such as:

- 24x7x365 convenience.
- Real time authorisation of credit/debit cards.
- Rapid, efficient transaction processing.
- Multiple payment options.
- Minimising risk by encrypting transactions and verifying other information.
- Flexible, powerful real-time reports generation.
- Facility for customer refund.
- Merchants can get rid of operating complex software and maintaining huge data.
- CA (Certifying Authority) authenticated secure servers.
- Collection of bulk data in a cost-efficient manner, with the additional benefit of being checked for card validity.
- Provision for multiple host interfaces.
- Comprehensive, simple administrative control.
- Gaining customers' support and merchants' trust.

Question No. -15

What are the challenges in the growth of Payment Gateway?

Answer:

Some challenges that are hampering the growth of payment gateways are:

- (a) Payments may not happen at all simply because the customer may not have an account with the banks supporting the payment gateway.
- (b) Some payment gateways have only limited number of banks.
- (c) There are problems of reliability, delivery, and limited payment avenues and general lack of trust among customers, and doubts about the service provider.

Question No. -16

Explain the popular derivative products:

- (a) Forward Importer
- (b) Forward Exporter
- (c) FX Call Option
- (d) FX Put Option
- (e) IRS USD Floating to Fixed

Answer:

Some of the popularly used derivative products are as follows:

(a) Forward Importer:

This Product consists of an FX Transaction where the Counterparty will buy the Notional Amount of USD against INR at the forward rate under predefined conditions.

Benefits / Risks:

- If the USD/INR rate on the settlement date of an FX Transaction is greater than Forward Rate, Counterparty (Importer) will buy at a rate better than the market rate. If this occurs, the structure will protect the Counterparty against appreciation in USD against INR.
- If the USD/INR rate on an FX Transaction is less than Forward Rate, Counterparty will buy at a rate worse than the market rate. If this occurs, the Counterparty will incur a loss, which could be potentially unlimited.

(b) Forward Exporter:

This Product consists of an FX Transaction where the Counterparty will sell the Notional Amount of USD against INR at the forward rate under predefined conditions.

Benefits / Risks:

- If the USD/INR rate on the settlement date of an FX Transaction is less than forward rate, Counterparty will sell at a rate better than the market rate. If this occurs, the structure will protect the Counterparty against depreciation in USD against INR.
- If the USD/INR rate on an FX Transaction is greater than Forward Rate, Counterparty will sell at a rate worse than the market rate. If this occurs, the Counterparty will incur a loss, which could be potentially unlimited.

(c) FX Call Option:

This Product consists of an FX Transaction where the Counterparty (generally Importer) has a right to buy the Notional Amount of USD against INR at the relevant Strike Rate(s) under predefined conditions. The Counterparty will pay the premium to bank.

Benefits / Risks:

- If the Expiry Reference Rate is greater than or equal to the Strike Rate, the Counterparty has the right to buy Notional Amount at the Strike Rate.
- If the Expiry Reference Rate is less than the Strike Rate, there is neither right nor obligation on the Counterparty to buy the Notional Amount. The Counterparty will be able to buy at the prevailing market rate, thus retaining participation in any INR appreciation without any limitation.

(d) FX Put Option:

This Product consists of an FX Transaction where the Counterparty (generally exporter) has a right to sell the Notional Amount of USD against INR at the relevant Strike Rate(s) under predefined conditions. The Counterparty will pay the Premium to bank.

Benefits / Risks:

- If the Expiry Reference Rate is less than or equal to the Strike Rate, the Counterparty has the right to sell Notional Amount at the Strike Rate.
- If the Expiry Reference Rate is greater than the Strike Rate, there is neither right nor obligation on the Counterparty to sell the Notional Amount. The Counterparty will be able to sell at the prevailing market rate, thus retaining participation in any USD appreciation without any limitation.

(e) IRS USD Floating to Fixed:

In this swap transaction one party pays periodic amounts in respect of each calculation period in a currency based on a fixed rate, and the other party pays periodic amounts in the same currency based on a floating rate that is reset periodically. Such periodic amounts calculations are based on predetermined notional amount(s) in that same currency. Notional amount(s) may be constant throughout the term of the transaction, or amortizing, accreting, or otherwise variable over the term.

- The Counterparty receives floating USD cashflows from bank and pays fixed USD cashflows, thereby, transforming its floating USD exposure into a fixed rate USD exposure via this swap structure.
- If the floating USD cashflows of the Counterparty is lower than fixed USD cashflows on sustained basis, then Counterparty would end up having net negative cashflows.
- If the floating USD cashflows of the Counterparty is higher than fixed USD cashflows on sustained basis, then Counterparty would end up having net positive cashflows.

Chapter - 10

INTERNATIONAL FINANCIAL MANAGEMENT

Contents

CONTENTS

1. INTERNATIONAL CAPITAL BUDGETING	2
(A) COMPLEXITIES INVOLVED IN INTERNATIONAL CAPITAL BUDGETING	2
(B) PROBLEMS AFFECTING FOREIGN INVESTMENT ANALYSIS	3
(C) ADJUSTED PRESENT VALUE (APV)	3
2. INTERNATIONAL SOURCES OF FINANCE	4
(A) FOREIGN CURRENCY CONVERTIBLE BONDS (FCCBS)	4
(B) AMERICAN DEPOSITORY RECEIPTS (ADRS)	5
(C) GLOBAL DEPOSITORY RECEIPTS (GDRS)	5
(i) Impact of GDRs on Indian Capital Market	5
(ii) Markets of GDRs	6
(iii) Mechanism of GDR	6
(iv) Characteristics of GDR	6
(D) EURO-CONVERTIBLE BONDS (ECBS)	6
(E) OTHER SOURCES	7
3. INTERNATIONAL FINANCIAL CENTRE (GIFT CITY)	8
(A) BENEFITS OF IFC	8
(B) CONSTITUENTS OF IFC	8
(C) GIFT CITY - INDIA'S INTERNATIONAL FINANCIAL SERVICES CENTRE	8
4. SOVEREIGN FUNDS	9
5. INTERNATIONAL WORKING CAPITAL MANAGEMENT	9
(A) REASONS FOR COMPLEXITY IN MANAGEMENT OF INTERNATIONAL CAPITAL MANAGEMENT	9
(B) MULTINATIONAL CASH MANAGEMENT	10
(C) ACCELERATING CASH INFLOWS	11
(D) MANAGING BLOCKED FUNDS	11
(E) MINIMISING TAX ON CASH FLOWS THROUGH TRANSFER PRICING MECHANISM	11
(F) LEADING AND LAGGING	11
(G) NETTING	12
Bilateral Netting System	12
Multilateral Netting System	12
(H) INTERNATIONAL INVENTORY MANAGEMENT	13
(I) INTERNATIONAL RECEIVABLES MANAGEMENT	14

INTERNATIONAL CAPITAL BUDGETING

(A) COMPLEXITIES INVOLVED IN INTERNATIONAL CAPITAL BUDGETING

Question: [MTP-May-2020]

Explain complexities involved in International Capital Budgeting.

Answer:

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

- | |
|---|
| a) Cash flows from foreign projects have to 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: [RTP-May-2022] [MTP-Nov-2022]

There exists a vast difference between Project and Parent cash flow? What are these factors? Briefly discuss.

Answer:

There exists a big difference between the project and parent cash flows due to tax rules, exchange controls. Management and royalty payments are returns to the parent firm. The basis on which a project shall be evaluated depend on one's own cash flows, cash flows accruing to the parent firm or both. Evaluation of a project on the basis of own cash flows entails that the project should compete favourably with domestic firms and earn a return higher than the local competitors. If not, the shareholders and management of the parent company shall invest in the equity/government bonds of domestic firms. A comparison cannot be made since foreign projects replace imports and are not competitors with existing local firms. Project evaluation based on local cash flows avoid currency conversion and eliminates problems associated with fluctuating exchange rate.

For evaluation of foreign project from the parent firm's angle, both operating and financial cash flows actually remitted to it form the yardstick for the firm's performance and the basis for distribution of dividends to the shareholders and repayment of debt/interest to lenders. An investment has to be evaluated on the basis of net after tax operating cash flows generated by the project. As both types of cash flows (operating and financial) are clubbed together, it is essential to see that financial cash flows are not mixed up with operating cash flows.

(B) PROBLEMS AFFECTING FOREIGN INVESTMENT ANALYSIS**Question:** [MTP-Nov-2020]*Explain the problems that are faced in International Capital Budgeting Decision and how these can be overcome.***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 in a position to reduce overall tax burden through the system of transfer pricing. For computation of actual after tax cash flows accruing to the parent firm, higher of home/ host country tax rate is used. If the project becomes feasible then it is acceptable under a more favourable tax regime. If not feasible, then, other tax saving aspects need to be incorporated in order to find out whether the project crosses the hurdle rate.

(C) ADJUSTED PRESENT VALUE (APV)

APV is used in evaluating foreign projects. The APV model is a value additive approach to capital consistent with risk involved in the cash flow.

Different components of the project's cash flow have to be discounted separately.

The APV method uses different discount rates for different segments of the total cash flows depending on the degree of certainty attached with each cash flow. The financial analyst tests the basic viability of the foreign project before accounting for all complexities. If the project is feasible no further evaluation based on accounting for other cash flows is done. If not feasible, an additional evaluation is done taking into consideration the other complexities

The APV model is represented as follows.

$$-I_0 + \sum_{t=1}^n \frac{X_t}{(1+k^*)^t} + \sum_{t=1}^n \frac{T_t}{(1+i_d)^t} + \sum_{t=1}^n \frac{S_t}{(1+i_d)^t}$$

Where $I_0 \rightarrow$ Present Value of Investment Outlay

$\frac{X_t}{(1+k^*)^t}$ 1 Present Value of Operating Cash Flow

$\frac{T_t}{(1+i_d)^t}$ 1 Present Value of Interest Tax Shields

$\frac{S_t}{(1+i_d)^t}$ 1 Present Value of Interest Subsidies

T_t 1 Tax saving in year t due to financial mix adopted

S_t 1 Before tax value of interests subsidies (on home currency) in year t due to project Specific financing

i_d 1 Before tax cost of dollar debt (home currency)

INTERNATIONAL SOURCES OF FINANCE

Indian companies have been able to tap global markets to raise foreign currency funds by issuing various types of financial instruments which are discussed as follows:

- (A) FOREIGN CURRENCY CONVERTIBLE BONDS (FCCBS)
- (B) AMERICAN DEPOSITORY RECEIPTS (ADRS)
- (C) GLOBAL DEPOSITORY RECEIPTS (GDRS)
- (D) EURO-CONVERTIBLE BONDS (ECBS)
- (E) OTHER SOURCES

(A) FOREIGN CURRENCY CONVERTIBLE BONDS (FCCBS)

Question: [Nov-2010-Old] [PM-2017] [May-2022-4M] [RTP-May-2021]

Explain briefly the salient features of FCCBs.

Answer: See third point below

A type of convertible bond issued in a currency different than the issuer's domestic currency. A convertible bond is a mix between a debt and equity instrument. It acts like a bond by making regular coupon and principal payments, but these bonds also give the bondholder the option to convert the bond into stock.

These types of bonds are attractive to both investors and issuers. The investors receive the safety of guaranteed payments on the bond and are also able to take advantage of any large price appreciation in the company's stock. (Bondholders take advantage of this appreciation by means of warrants attached to the bonds, which are activated when the price of the stock reaches a certain point.) 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.

1. Advantages of FCCBs

- (i) 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.
- (ii) 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.
- (iii) 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.

2. Disadvantages of FCCBs

- (i) 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.
- (ii) FCCBs mean creation of more debt and a forex outgo in terms of interest which is in foreign exchange.
- (iii) 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.

3. Salient Features of FCCBs:

FCCBs are important source of raising funds from abroad. Their salient features are –

1. FCCB is a bond denominated in a foreign currency issued by an Indian company which can be converted into shares of the Indian Company denominated in Indian Rupees.
2. Prior permission of the Department of Economic Affairs, Government of India, Ministry of Finance is required for their issue
3. There will be a domestic and a foreign custodian bank involved in the issue
4. FCCB shall be issued subject to all applicable Laws relating to issue of capital by a company.
5. Tax on FCCB shall be as per provisions of Indian Taxation Laws and Tax will be deducted at source.
6. Conversion of bond to FCCB will not give rise to any capital gains tax in India.

(B) AMERICAN DEPOSITORY RECEIPTS (ADRS)

Question: [Nov-2012-4M] [May-2014-4M] [PM]

Write short notes on American Depository Receipts (ADRs).

Answer:

Depository receipts issued by a company in the United States of America (USA) is known as **American Depository Receipts (ADRs)**.

Such receipts must be issued in accordance with the provisions stipulated by the Securities and Exchange Commission of USA (SEC) which are very stringent.

An ADR is generally created by the deposit of the securities of a non-United States company with a custodian bank in the country of incorporation of the issuing company.

The custodian bank informs the depository in the United States that the ADRs can be issued. ADRs are United States dollar denominated and are traded in the same way as are the securities of United States companies.

The ADR holder is entitled to the same rights and advantages as owners of the underlying securities in the home country. Several variations on ADRs have developed over time to meet more specialized demands in different markets.

One such variation is the GDR which are identical in structure to an ADR, the only difference being that they can be traded in more than one currency and within as well as outside the United States

(C) GLOBAL DEPOSITORY RECEIPTS (GDRS)

Question: [Nov-2015-4M] [PM]

Write short notes on GDR.

Question: [New-Nov-2009-6M] [SM-TYKQ] [PM-2017]

Write short notes on Impact of GDR on Indian capital market.

Answer: See first point below

Question: [SM-TYKQ]

What is the impact of GDRs on Indian Capital Market?

Answer: See first point below

A depository receipt is basically a negotiable certificate, denominated in a currency not native to the issuer, that represents the company's publicly - traded local currency equity shares. Most GDRs are denominated in USD, while a few are denominated in Euro and Pound Sterling. The Depository Receipts issued in the US are called **American Depository Receipts (ADRs)**, which anyway are denominated in USD and outside of USA, these are called **GDRs**. In theory, though a depository receipt can also represent a debt instrument, in practice it rarely does.

DRs (depository receipts) are created when the local currency shares of an Indian company are delivered to the depository's local custodian bank, against which the Depository bank (such as the Bank of New York) issues depository receipts in US dollar.

These depository receipts may trade freely in the overseas markets like any other dollar-denominated security, either on a foreign stock exchange, or in the over-the-counter market, or among a restricted group such as Qualified Institutional Buyers (QIBs). Indian issues have taken the form of GDRs to reflect the fact that they are marketed globally, rather than in a specific country or market.

(i) Impact of GDRs on Indian Capital Market

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

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

(ii) Markets of GDRs

- ⊙ GDR's are sold primarily to institutional investors.
- ⊙ Demand is likely to be dominated by emerging market funds.
- ⊙ Switching by foreign institutional investors from ordinary shares into GDRs is likely.
- ⊙ Major demand is also in UK, USA (Qualified Institutional Buyers), South East Asia (Hong Kong, Singapore), and to some extent continental Europe (principally France and Switzerland).

(iii) Mechanism of GDR

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

**(iv) Characteristics of GDR**

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

(D) EURO-CONVERTIBLE BONDS (ECBS)

Question: [May-2013-4M] [PM]

Write short notes on Euro-convertible Bond

Answer:

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

● **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.

● **Put options :**

A 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.

(E) OTHER SOURCES

Question: [SM-TYKQ] [Nov-2015-Old-4M] [PM-2017]

Write a short note on Instruments of International Finance.

Answer: *(Write any 5 points in exam)*

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.
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 predetermined price. Usually there is a 5 years maturity period and they are treated as a deferred equity issue.
Euro-bonds with Equity Warrants	These bonds carry a coupon rate determined by the market rates. The warrants are detachable. Pure bonds are traded at a discount. Fixed income funds' managements may like to invest for the purposes of regular income.
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.
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 (i) Traditional fixed rate bonds. (ii) Floating rate Notes(FRNs) (iii) Convertible Bonds
Foreign Bonds	Foreign bonds are denominated in a currency which is foreign to the borrower and sold at the country of that currency. Such bonds are always subject to the restrictions and are placed by that country on the foreigners funds.
Euro Commercial Papers	These are short term money market securities usually issued at a discount, for maturities less than one year.
Credit Instruments	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. The price or the rate of each instrument, therefore, varies with extent of the loss of interest and risk of loss involved. There are, therefore, different rates of exchange applicable to different types of credit instruments.

INTERNATIONAL FINANCIAL CENTRE (GIFT CITY)

(A) BENEFITS OF IFC

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

(B) CONSTITUENTS OF IFC

(i) Highly developed Infrastructure:	A leading edge infrastructure is a prerequisite for creating a platform to offer internationally competitive financial services.
(ii) Stable Political Environment:	Destabilized political environment brings country risk for investment by foreign nationals. Hence, to accelerate foreign participation in growth of financial center, stable political environment is a prerequisite.
(iii) Strategic Location:	The geographical location of the finance center should be strategic such as near to airport, seaport and should have friendly weather.
(iv) Quality Life:	The quality of life at the center should be good as center retains highly paid professionals from own country as well from outside.
(v) Rationale Regulatory Framework:	Rationale legal regulatory framework is another prerequisite of international finance center as it should be fair and transparent.
(vi) Sustainable Economy:	The economy should be sustainable and should possess capacity to absorb all the shocks as it will boost investors' confidence.

(C) GIFT CITY - INDIA'S INTERNATIONAL FINANCIAL SERVICES CENTRE

In 2007, the concept of establishing an International Financial Center (IFC) in India was initiated to compete with financial hubs like Dubai and Hong Kong. The goal was to retain financial services businesses within India by providing a separate jurisdiction with relaxed tax and regulatory laws. The International Financial Services Centre (IFSC) at GIFT Multi Services SEZ was operationalized by the Government of India in April 2015, offering a competitive tax regime. India's first International Exchange, India INX, a subsidiary of Bombay Stock Exchange, was inaugurated in January 2017, facilitating trading in various financial instruments.

On June 5, 2017, the National Stock Exchange (NSE) also launched trading at GIFT, focusing initially on derivative products. GIFT IFSC boasts a competitive cost of operations, a favorable tax regime, single window clearance, relaxed company law provisions, and an international arbitration center. It is moving towards a unified regulatory mechanism. Notably, Foreign Exchange Management Act (FEMA) does not apply at GIFT City to support internationalization. Consequently, more financial institutions are establishing business units in GIFT, benefiting from reduced taxes and the ability to offer foreign currency loans to Indian and foreign companies. GIFT City is positioned as a new Financial & Technology Gateway of India for the global financial community.

SOVEREIGN FUNDS

Popular sources for funding Sovereign Wealth Fund (SWF)

- ❖ Surplus reserves from state-owned natural resource revenues and trade surpluses,
- ❖ Bank reserves that may accumulate from budgeting excesses,
- ❖ Foreign currency operations,
- ❖ Money from privatizations, and
- ❖ Governmental transfer payments.

Common Objectives of a Sovereign Wealth Fund (SWF)

- Protection & Stabilization of the budget and economy from excess volatility in revenues/exports
- Diversify from non-renewable commodity exports
- Earn better returns than returns on foreign exchange reserves
- Assist monetary authorities dissipate unwanted liquidity
- Increase savings for future generations
- Fund social and economic development
- Ensuring Sustainable long term capital growth for target countries
- Political strategy

Traditional classifications of SWFs include:

- ✓ Stabilization funds
- ✓ Savings or future generation funds
- ✓ Public benefit pension reserve funds
- ✓ Reserve investment funds
- ✓ Strategic Development Sovereign Wealth Funds (SDSWF)

Various types of Sovereign Investment Vehicles

- Sovereign Wealth Funds (SWFs)
- Public Pension Funds
- State-Owned Enterprises
- Sovereign Wealth Enterprises (SWEs)

INTERNATIONAL WORKING CAPITAL MANAGEMENT

(A) REASONS FOR COMPLEXITY IN MANAGEMENT OF INTERNATIONAL CAPITAL MANAGEMENT

1. A multinational firm has a wider option for financing its current assets. A MNC has funds flowing in from different parts of international financial markets. Therefore, it may choose to avail financing either locally or from global financial markets. Such an opportunity does not exist for pure domestic firms.
2. Interest and tax rates vary from one country to the other. A Treasurer associated with a multinational firm has to consider the interest/ tax rate differentials while financing current assets. This is not the case for domestic firms.
3. A multinational firm is confronted with foreign exchange risk due to the value of inflow/outflow of funds as well as the value of import/export are influenced by exchange rate variations. Restrictions imposed by the home or

host country government towards movement of cash and inventory on account of political considerations affect the growth of MNCs. Domestic firm limit their operations within the country and do not face such problems.

4. With limited knowledge of the politico-economic conditions prevailing in different host countries, a Manager of a multinational firm often finds it difficult to manage working capital of different units of the firm operating in these countries. The pace of development taking place in the communication system has to some extent eased this problem.

In countries which operate on full capital convertibility, a MNC can move its funds from one location to another and thus mobilize and 'position' the funds in the most efficient way possible. Such freedom may not be available for MNCs operating in countries that have not subscribed to full capital convertibility (like India).

(B) MULTINATIONAL CASH MANAGEMENT

Question: [Nov-2019-4M] [RTP-Nov-2022]

List the main objectives of International Cash Management.

Briefly explain how a Centralized Cash Management system helps MNCs in their treasury management.

Answer:

International money managers follow the traditional objectives of cash management viz.

- (1) effectively managing and controlling cash resources of the company as well as
- (2) achieving optimum utilization and conservation of funds.

The main objectives of an effective system of international cash management are:

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

A centralized cash system helps MNCs as follows:

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

International Cash Management has two basic objectives:

- (1) Optimising Cash Flow movements.
- (2) Investing excess cash.

There are numerous ways of optimising cash inflows:

1. Accelerating cash inflows.
2. Managing blocked funds.
3. Leading and Lagging strategy.

4. Using netting to reduce overall transaction costs by eliminating number of unnecessary conversions and transfer of currencies.
5. Minimising tax on cash flow through international transfer pricing.

(C) ACCELERATING CASH INFLOWS

Faster recovery of cash inflows helps the firm to use them whenever required or to invest them for better returns. Customers all over the world are instructed to send their payments to lockboxes set up at various locations, thereby reducing the time and transaction costs involved in collecting payments. Also, through pre-authorized payment, an organization may be allowed to charge the customer's bank account up to some limit.

(D) MANAGING BLOCKED FUNDS

The host country may block funds of the subsidiary to be sent to the parent or make sure that earnings generated by the subsidiary be reinvested locally before being remitted to the parent so that jobs are created and unemployment reduced. The subsidiary may be instructed to obtain bank finance locally for the parent firm so that blocked funds may be utilised to pay off bank loans.

The parent company has to assess the potential of future funds blockage in a foreign country. MNCs have to be aware of political risks cropping up due to unexpected blockage of funds and devise ways to benefit their shareholders by using different methods for moving blocked funds through transfer pricing strategies, direct negotiations, leading and lagging and so on

(E) MINIMISING TAX ON CASH FLOWS THROUGH TRANSFER PRICING MECHANISM

Large entities having many divisions require goods and services to be transferred frequently from one division to another. The profits of different divisions are determined by the price to be charged by the transferor division to the transferee division. The higher the transfer price, the larger will be the gross profit of the transferor division with respect to the transferee division. The position gets complicated for MNCs due to exchange restrictions, inflation differentials, import duties, tax rate differentials between two nations, quotas imposed by host country, etc.

(F) LEADING AND LAGGING

Question: [Nov-2018-Old-4M]

Write short notes on Leading and Lagging.

Answer:

This technique is used by subsidiaries for optimizing cash flow movements by adjusting the timing of payments to determine expectations about future currency movements. MNCs accelerate (lead) or delay (lag) the timing of foreign currency payments through adjustment of the credit terms extended by one unit to another.

A MNC in the USA has subsidiaries all over the world. A subsidiary in India purchases its supplies from another subsidiary in Japan. If the Indian subsidiary expects the rupee to fall against the yen, then it shall be the objective of that firm to accelerate the timing of its payment before the rupee depreciates. Such a strategy is called **Leading**.

On the other hand, if the Indian subsidiary expects the rupee to rise against the yen then it shall be the objective of that firm to delay the timing of its payment before the rupee appreciates. Such a strategy is called **Lagging**. MNCs should be aware of the government restrictions in such countries before availing such strategies.

(G) NETTING**Question:** [May-2012-4M]*Write short notes on meaning and advantage of netting.***Answer:**

It is a technique of optimizing 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 minimizing the total volume of inter-company fund flow.

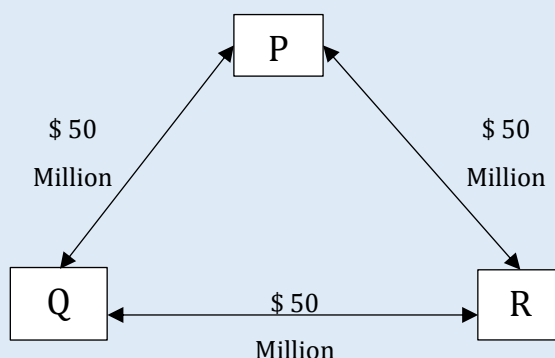
Advantages derived from netting system includes:

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

Types of Netting

Bilateral Netting System	Multilateral 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.	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.

Subsidiary P sells \$ 50 million worth of goods to Subsidiary Q, Subsidiary Q sells \$ 50 million worth of goods to Subsidiary R and Subsidiary R sells \$ 50 million worth of goods to Subsidiary P. Through multilateral netting inter affiliate fund transfers are completely eliminated.



The netting system uses a matrix of receivables and payables to determine the net receipt / net payment position of each affiliate at the date of clearing. A US parent company has subsidiaries in France, Germany, UK and Italy. The amounts due to and from the affiliates is converted into a common currency viz. US dollar and entered in the following matrix.

Inter Subsidiary Payments Matrix (US \$ Thousands)

		Paying affiliate				
Receiving affiliate		France	Germany	UK	Italy	Total
	France	---	40	60	100	200
	Germany	60	---	40	80	180
	UK	80	60	---	70	210
	Italy	100	30	60	---	190
	Total	240	130	160	250	780

Without netting, the total payments are \$ 780 thousands. Through multinational netting these transfers will be reduced to \$ 100 thousands, a net reduction of 87%. Also currency conversion costs are significantly reduced. The transformed matrix after consolidation and net payments in both directions convert all figures to US dollar equivalents to the below form:

Netting Schedule (US \$ Thousands)

	Receipt	Payment	Net Receipt	Net Payment
France	200	240	---	40
Germany	180	130	50	---
UK	210	160	50	---
Italy	190	250	---	60
			100	100

(H) INTERNATIONAL INVENTORY MANAGEMENT

An international firm possesses normally a bigger stock than EOQ and this process is known as **stock piling**.

The different units of a firm get a large part of their inventory from sister units in different countries. This is possible in a vertical set up. For political disturbance there will be bottlenecks in import.

If the currency of the importing country depreciates, imports will be costlier thereby giving rise to stock piling. To take a decision against stock piling the firm has to weigh the cumulative carrying cost vis-à-vis expected increase in the price of input due to changes in exchange rate.

If the probability of interruption in supply is very high, the firm may opt for stock piling even if it is not justified on account of higher cost.

Also in case of global firms, lead time is larger on various units as they are located far off in different parts of the globe. Even if they reach the port in time, a lot of customs formalities have to be carried out. Due to these factors, re-order point for international firm lies much earlier.

The final decision depends on the quantity of goods to be imported and how much of them are locally available. Relying on imports varies from unit to unit but it is very much large for a vertical set up.

(I) INTERNATIONAL RECEIVABLES MANAGEMENT

Credit Sales lead to the emergence of account receivables.

There are two types of such sales viz.

(i) Inter firm Sales in the global aspect

In case of Inter firm Sales, the currency in which the transaction should be denominated and the terms of payment need proper attention. With regard to currency denomination, the exporter is interested to denominate the transaction in a strong currency while the importer wants to get it denominated in weak currency.

(ii) Intra firm Sales in the global aspect

In case of Intra firm sales, the focus is on global allocation of firm's resources. Different parts of the same product are produced in different units established in different countries and exported to the assembly units leading to a large size of receivables.

The question of quick or delayed payment does not affect the firm as both the seller and the buyer are from the same firm though the one having cash surplus will make early payments while the other having cash crunch will make late payments. This is a case of intra firm allocation of resources where leads and lags explained earlier will be taken recourse to.

Chapter-11

INTEREST RATE RISK MANAGEMENT

Contents

Question-1 [Nov-2010-Old-4M] [May-2015-Old -4M]	2
Give the meaning of 'Caps, Floors and Collars' options.....	2
Question-2 [May-2010-Old -4M] [TYKQ-SM-New]	2
What do you know about swaptions and their uses?	2
Question-3 [July-2021-4M]	3
Define Interest Rate Swaption. State its principal features.	3
Question-4 [Nov-2008-Old -4M] [May-2012-Old -4M]	3
Write short notes on Interest Swap.....	3
Question-5 [May-2015-Old -4M]	3
Explain the meaning of the following relating to Swap transactions:	3
(i) Plain Vanilla Swaps	3
(ii) Basis Rate Swaps	3
(iii) Asset Swaps	3
(iv) Amortising Swaps	3
Question-6 [May-2014-Old -4M] [TYKQ-SM] [Dec-2021-4M]	4
Write short notes on Forward Rate Agreements.....	4
Question-7 [Nov-2005-Old -2.5M]	4
What is interest rate risk, reinvestment risk & default risk & what are the types of risk involved in investments in G-Sec.?	4
Question-8 [May-2022 -4M]	5
What is Net interest position risk and Price risk?	5
Question-9 [Nov-2022 -4M]	5
Explain various methods of hedging of interest rate risk.	5
Question:10 [Nov-2022-4 Marks]	6
Briefly explain Asset and Liability Management (ALM).....	6

Question-1 [Nov-2010-Old-4M] [May-2015-Old-4M]

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 a borrower 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-2 [May-2010-Old-4M] [TYKQ-SM-New]

What do you know about swaptions and their uses?

[May-2023-4M]

Swaptions can be applied for speculation purposes or to hedge a portion of their swap books. What are the other areas of its application?

Answer:

- Swaptions are combination of the features of two derivative instruments, i.e., option and swap.
- A swaptions is an option on an interest rate swap. It gives the buyer of the swaptions the right but not obligation to enter into an interest rate swap of specified parameters (maturity of the option, notional principal, strike rate, and period of swap). Swaptions are traded over the counter, for both short and long maturity expiry dates, and for wide range of swap maturities.
- The price of a swaptions depends on the strike rate, maturity of the option, and expectations about the future volatility of swap rates.
- The swaptions premium is expressed as basis points.

Uses of swaptions:

- (a) It can be applied in a variety of ways for both active traders as well as for corporate treasures.
- (b) It have become useful tools for hedging embedded optionality which is common in the natural course of many businesses.
- (c) It is useful for borrowers targeting an acceptable borrowing rate.
- (d) It is also useful to those businesses tendering for contracts.
- (e) It also provides protection on callable/puttable bond issues.

Alternatively, refer class notes for simple explanation.

Question-3 [July-2021-4M]

Define Interest Rate Swaption. State its principal features.

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 (also called Call Swaption).
- A fixed rate receiver swaption (also called Put Swaption).

Principal Features of Swaptions

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

Question-4 [Nov-2008-Old -4M] [May-2012-Old -4M]

Write short notes on Interest Swap.

Answer:**Interest Swap:**

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-5 [May-2015-Old -4M]

Explain the meaning of the following relating to Swap transactions:

- Plain Vanilla Swaps
- Basis Rate Swaps
- Asset Swaps
- Amortising Swaps

Answer:**(i) 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.

(ii) Basis Rate 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.

(iii) Asset Swap:

Similar to 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.

(iv) 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-6 [May-2014-Old -4M] [TYKQ-SM] [Dec-2021-4M]

Write short notes 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. The principal amount of the agreement is termed "notional" because, while it determines the amount of the payment, actual exchange of the principal never takes place.
- ◆ It is settled at maturity in cash representing the profit or loss. A bank that sells an FRA agrees to pay the buyer the increased interest cost on some "notional" principal amount if some specified maturity of LIBOR is above a stipulated "forward rate" on the contract maturity or settlement date. Conversely, the buyer agrees to pay the seller any decrease in interest cost if market interest rates fall below the forward rate.

Final settlement of the amounts owed by the parties to an FRA is determined by the formula

$$= \frac{\text{Notional Amount} \times (\text{difference in Actual rate and contract rate}) \times \frac{\text{No of days in a contract period}}{360/365}}{(1 + \text{periodic Actual interest rate})}$$

Question-7 [Nov-2005-Old -2.5M]

What is interest rate risk, reinvestment risk & default risk & what are the types of risk involved in investments in G-Sec.?

Answer:**Interest Rate Risk:**

Interest Rate Risk, market risk or price risk are essentially one and the same. These are typical of any fixed coupon security with a fixed period to maturity. This is on account of inverse relation of price and interest. As the interest rate rises the price of a security will fall. However, this risk can be completely eliminated in case an investor's investment horizon identically matches the term of security.

Re-investment Risk:

This risk is again akin to all those securities, which generate intermittent cash flows in the form of periodic coupons. The most prevalent tool deployed to measure returns over a period of time is the yield-to-maturity (YTM) method. The YTM calculation assumes that the cash flows generated during the life of a security is reinvested at the rate of YTM. The risk here is that the rate at which the interim cash flows are reinvested may fall thereby affecting the returns.

Thus, reinvestment risk is the risk that future coupons from a bond will not be reinvested at the prevailing interest rate when the bond was initially purchased.

Default Risk:

The event in which companies or individuals will be unable to make the required payments on their debt obligations. Lenders and investors are exposed to default risk in virtually all forms of credit extensions. To mitigate the impact of default risk, lenders often charge rates of return that correspond to the debtor's level of default risk. The higher the risk, the higher the required return, and vice versa. This type of risk in the context of a Government security is always zero. However, these securities suffer from a small variant of default risk i.e. maturity risk. Maturity risk is the risk associated with the likelihood of government issuing a new security in place of redeeming the existing security. In case of Corporate Securities it is referred to as credit risk.

Question-8 [May-2022 -4M]

What is Net interest position risk and Price risk?

Answer:

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.

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.

Question-9 [Nov-2022 -4M]

Explain various methods of hedging of interest rate risk.

Answer:

Methods of Hedging of Interest Rate Risk can be broadly divided into following two categories:

(A) Traditional Methods: These methods can further be classified in following categories:

- (i) Asset and Liability Management (ALM):** ALM is a comprehensive and dynamic framework for measuring, monitoring and managing the market risk of a bank. It is the management of structure of Balance Sheet (liabilities and assets) in such a way that the net earnings from interest are maximized within the overall risk preference (present and future) of the institutions.
- (ii) Forward Rate Agreement (FRA):** Normally it is used by banks to fix interest costs on anticipated future deposits or interest revenues on variable-rate loans indexed to Benchmark Interest Rate e.g. LIBOR, MIBOR etc. A bank that sells an FRA agrees to pay the buyer the increased interest cost on some "notional" principal amount if Reference Rate of some specified maturity is above a stipulated "Forward Interest Rate" on the contract maturity or settlement date. Conversely, the buyer agrees to pay the seller any decrease in interest cost if Reference Rate fall below the forward rate.

(B) Modern Methods: These methods can further be classified in following categories:

- (i) Interest Rate Futures (IRF):** An interest rate future is a contract between the buyer and seller agreeing to the future delivery of any interest-bearing asset. The interest rate future allows the buyer and seller to lock in the price of the interest-bearing asset for a future date.

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

$(\text{Conversion Factor}) \times (\text{futures price}) = \text{actual delivery price for a given deliverable bond.}$

(b) Cheapest to Deliver (CTD): [MTP-May-2020]

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

- (ii) **Interest Rate Options (IRO):** Also known as Interest Rate Guarantee (IRG) as option is a right not an obligation and acts as insurance by allowing businesses to protect themselves against adverse interest rate movements while allowing them to benefit from favourable movements.

It should be noted that the IRO is basically a series of FRAs which are exercisable at predetermined benchmarked interest rates on each period say 3 months, 6 months etc.

- (iii) **Interest Rate Swaps:** 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.

- (iv) **Swaptions:** 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.

Question:10 [Nov-2022-4 Marks]

Briefly explain Asset and Liability Management (ALM).

Answer:

Asset-Liability Management (ALM) is one of the important tools of risk management in commercial banks of India. Indian banking industry is exposed to a number of risks prevailing in the market such as market risk, financial risk, interest rate risk etc. The net income of the banks is very sensitive to these factors or risks.

ALM is a comprehensive and dynamic framework for measuring, monitoring and managing the market risk of a bank. It is the management of structure of Balance Sheet (liabilities and assets) in such a way that the net earnings from interest are maximized within the overall risk preference (present and future) of the institutions. The ALM functions extend to liquidity risk management, management of market risk, trading risk management, funding and capital planning and profit planning and growth projection.

Banks and other financial institutions provide services which expose them to various kinds of risks like credit risk, interest risk, and liquidity risk. Asset liability management is an approach that provides institutions with protection that makes such risk acceptable. Asset-liability management models enable institutions to measure and monitor risk, and provide suitable strategies for their management.

It is therefore appropriate for institutions (banks, finance companies, leasing companies, insurance companies, and others) to focus on asset-liability management when they face financial risks of different types. Asset-liability management includes not only a formalization of this understanding, but also a way to quantify and manage these risks.

In a sense, the various aspects of balance sheet management deal with planning as well as direction and control of the levels, changes and mixes of assets, liabilities, and capital.

Chapter - 12

CORPORATE VALUATION

Contents

1. IMPORTANT TERMS ASSOCIATED WITH VALUATION	2
2. APPROACHES/ METHODS OF VALUATION	2
(A) ASSET BASED APPROACH	2
(B) INCOME BASED APPROACH.....	3
(C) CASH FLOW BASED APPROACH	3
3. MEASURING COST OF EQUITY	4
(A) CAPITAL ASSETS PRICING MODEL (CAPM)	4
(B) ARBITRAGE PRICING MODEL	4
(C) ESTIMATING BETA AND VALUATION OF UNLISTED COMPANIES	4
(D) RELATIVE VALUATION	5
4. OTHER APPROACHES TO VALUE MEASUREMENT	6
(A) CONTEMPORARY APPROACHES TO VALUATION.....	6
(B) ECONOMIC VALUE ADDED (EVA).....	6
(C) MARKET VALUE ADDED (MVA)	6
(D) SHAREHOLDER VALUE ANALYSIS (SVA)	7
5. GOING CONCERN AND NON-GOING CONCERN VALUATION	7
6. VALUATION OF DISTRESSED COMPANIES.....	8
7. VALUATION OF START UPS	8
VALUE DRIVERS FOR STARTUPS:	9
METHODS FOR VALUING STARTUPS	9
8. VALUATION OF DIGITAL PLATFORMS.....	11
CATEGORY	11
DESCRIPTIONS	11
9. IMPACT OF ESG ON VALUATION	11

IMPORTANT TERMS ASSOCIATED WITH VALUATION

PV of cash flows (Present Value)	A receipt of Rs.1,000 twelve months hence would not be the same as of today, because of concept of Time Value of Money. Accordingly the discounted value of Rs. 1,000 a year at the rate of 10% shall be Rs. 909 approximately.
Internal Rate of Return (IRR)	IRR is the discount rate that will equate the net present value (NPV) of all cash flows from a particular investment or project to zero. We can also visualize IRR as an interest rate that will get the NPVs to equal to the investment – the higher the IRR of a project, the more likely it gets selected for further investments.
Return on investment (ROI)	ROI is the return over the investment made in an entity from a stakeholder point of view. A simple example would be where the stakeholder has sold shares valued at 1400, invested initially at 1000; the ROI would be the return divided by the investment cost, which would be $(1400-1000)/1000 = 40\%$ in this case.
Perpetual Growth Rate (Gordon Model)	Gordon's model assumes a perpetual growth in dividend; thereby a potential investor eyeing stable inflows will take the latest Dividend payout and factor it with his expected rate of return. However, this model is the darling of academicians as it can neatly fit into a 'constant rate' model for deliberation purposes.
Terminal Value (TV)	In the valuation, to 'terminate' would be to exit out of particular investment or line of business. So, when an investor decides to pull out and book profits, he would not only be expecting a fair value of the value created, but also would definitely look to the 'horizon' and evaluate the future cash flows, to incorporate them into his 'selling price'. Hence, terminal value (TV) is also referred to as the 'horizon' value that the investor will forecast for valuing his investment at the exit point. Mostly TV is estimated using a perpetual growth model as per the Gordon model.

APPROACHES/ METHODS OF VALUATION

There are three approaches to valuing an enterprise:

(A) ASSETS BASED VALUATION MODEL

(B) EARNING BASED MODELS

(C) CASH FLOW BASED MODELS

(A) ASSET BASED APPROACH

In this approach is the standard asset value based approach where the starting point is the latest set of financial statements. A perusal of the same would help form an opinion on the type of the assets held by the enterprise and the book value of same. The assets can be tangible or intangible, and will be referred to as 'Non-Current assets' in the financials. A part of the assets would always be residing in the working capital cycle referred to as 'Net current assets', - the current assets needs to be net off with current liabilities (the payables side of the supply chain).



Book Value = [Total Assets - Long Term Debt] = [Share capital + Free Reserves]

The book value approach will not essentially represent the true price of the assets because:

- Tangible assets may be undervalued or even overvalued
- Intangible assets may no longer be of actual saleable worth in the market
- Long term debt may have a terminal pay out that needs to be catered to

So, in reality, the book value is always adjusted to such factors to assess the 'net realizable value' of the assets and hence is called as the 'Adjusted Book Value' approach

(B) INCOME BASED APPROACH

This approach looks to overcome the drawbacks of using the asset-backed valuation approach by referring to the earning potential and using a multiplier - 'capitalization rate'. Earnings can best be depicted by EBITDA (Earnings Before Interest, Taxes, Depreciation and Amortization). The EV obtained above will be divided by the number of shares to arrive at the value per share.

Another way to calculate the value of a business would be to take the EV/EBITDA multiple approach. It is a very popular method amongst analysts world over, as it overcomes most of the deficiencies in valuation.

Enterprise Value is also commonly referred to as 'Firm Value' or 'Total Enterprise Value (TEV)'.

We can approach Enterprise Value (EV) in two ways :

a) Take Entity Value as the base, and then adjust for debt values for arriving the 'EV';

Or

b) Take a balance sheet based approach, and arrive at EV.

A couple of interesting details are:

1. Enterprise Value calculated is more from a point of view of arriving at an 'acquisition price' for a going concern that a potential buyer would provide, and,
2. Since we are using market cap, the message is loud and clear – market is intelligent. So it follows naturally that the CMP has already factored in past and future earnings, unsystematic risks and even systematic risks, and is continually adjusted for new or incremental price sensitive factors.

Both the above points can be countered by arguing:

- a) That the long-term investor who is looking for a stable dividend payout will not bother too much on market cap, and,
- b) The market need not know the best, if the stock is a small or a mid-cap one. However, the later argument can be overcome by drawing comparisons to similar industries in the same space.

Questions: [RTP-May-2021]

Explain how Cash flow-based approach of valuation is different from Income based approach and also explain briefly the steps involved in this approach.

Answer:

(C) CASH FLOW BASED APPROACH

As opposed to the asset based and income based approaches, the cash flow approach takes into account the quantum of free cash that is available in future periods, and discounting the same appropriately to match to the flow's risk.

If the present value arrived post application of the discount rate is more than the current cost of investment, the valuation of the enterprise is attractive to both stakeholders as well as externally interested parties (like stock analysts). It attempts to overcome the problem of over-reliance on historical data as seen in both the previous methods.

There are essentially five steps in performing DCF based valuation:

- a) Arriving at the 'Free Cash Flow'
- b) Forecasting of future cash flows (also called projected future cash flows)
- c) Determining the discount rate based on the cost of capital
- d) Finding out the Terminal Value (TV) of the enterprise
- e) Finding out the present values of both the free cash flows and the TV, and interpretation of the results.

MEASURING COST OF EQUITY

(A) CAPITAL ASSETS PRICING MODEL (CAPM)

An alternative way to look at value of an investment or a portfolio is to view returns as a direct benefit of assuming risks. As discussed earlier the CAPM model is represented by the below formula:

$$R = r_f + \beta (r_m - r_f)$$

Where R = expected rate of return

R_f = risk free rate of return

β = Beta value of the stock

R_m = market rate of return

(B) ARBITRAGE PRICING MODEL

It is obvious that the CAPM has gained massive popularity due to its 'intuitive based approach' of classifying risks into 2 buckets – 'a risk free part' and 'the risk part that is relative to the market index'. However, this is also its greatest inherent weakness - the oversimplification of risks.

In a simplistic way, if a particular asset, say a stock, has its major influencers as the 'interest rate fluctuations' and the 'sectoral growth rate', then the stocks' return would be calculated by using the Arbitrage Pricing Theory (APT) in the following manner:

a) Calculate the risk premium for both these two risk factors (beta for the risk factor 1 – interest rate, and beta of the risk factor 2 – sector growth rate; and, b) Adding the risk free rate of return.

Thus, the formula for APT is represented as :

$$R_f + \beta_1(RP_1) + \beta_2(RP_2) + \dots \beta_j(RP_n)$$

(C) ESTIMATING BETA AND VALUATION OF UNLISTED COMPANIES

Step I	Take the industry beta - the beta of similar listed companies would be good starting point. As stated above, the levered beta should be converted into unlevered to remove the impact of debt. The formula to be used is: Unlevered beta = Beta / 1 + (1 - tax rate) x (debt / equity) Suppose you are unable to find out a straight benchmark beta. Then find the 'best fit' and Identify a 'peer group' of companies that operate in the same risk range and then recalibrate the underlying parameters such as earnings to sales, scale of operations etc. to find out the enterprise value. Multiple based on EV will give a more accurate figure of the firm value.
Step II	You need to be acutely aware that unlike listed companies, the financial statements of privately held firms may be having some gaps in accounting policies and accounting estimates, that would be needed to be adjusted to determine the correct earnings estimate.
Step III	And the next step is to find out the Cost of equity. This can be done using the CAPM technique.
Step IV	Now as stated earlier, the company would more sooner than later have leveraged funds on its balance sheet. In the absence of a straight comparison for the resulting capital structure, this would be more estimate driven. The rate of borrowing cost can also be taken in line with the peers. The bankers to the private company can also give a quote in this case. Thus, the WACC rate that is to be applied will be achieved from this step.
Step V	Since this is a private company, the owners will demand a return towards 'goodwill'. However, in some cases, the acquisition price may include sweeteners for the erstwhile owners to continue in the merged firm, which will then dispense off the need to perform this step.
Step VI	Finally the future cash flows of the private company will be treated (discounted) using the WACC rate obtained above as the discount factor.
Step VII	The sum of the PV of the cashflows generated by the DCF will be the value of the firm.

Question: [TYKQ-SM-New]

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:

(D) RELATIVE VALUATION

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. (Comparable firms would mean the ones having similar asset and risk dispositions, and assumed to continue to do so over the comparison period). In the process, there may be extrapolations set to the desired range to achieve the target set.

To elaborate:

- (1.) Find out the 'drivers' that will be the best representative for deriving at the multiple
- (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

Next, assume we do have a comparable firm. May be its demonstrating the same characteristics in a larger scale than our company F Ltd. But how do we get absolutely sure on this? As discussed earlier, we may take similar firms from dissimilar industries. Or we get the sum-total of all firms within the industry and then do appropriate regressions to remove both large-scale factors and structural differences. An important factor would be leveraged capital. Listed companies do use to a lot more of leverage, and F Ltd may have to seriously recalibrate if its balance sheet stands light.

And finally, say we have arrived at a conclusion that the comparable firm is indeed an efficient model and is the correct indicator for appraising F Ltd – taking the values of comparable firms' Beta and potential growth estimates, you can value F Ltd.

We can conclude that:

⇒ 'Relative Valuation' is a comparative driven approach that assumes that the value of similar firms can form a good indicator for the value of the tested firm.

There are some **assumptions** that are inherent to this model –

- i. The market is efficient
- ii. The function between the fundamentals and the multiples are linear
- iii. The firms that are comparable are similar to structure, risk and growth pattern.

Question: [MTP-Nov-2021]

Relative Valuation approach is a significant departure from Intrinsic Value approach. Explain

Answer:

To some extent this statement is correct as in practical implementation of fair value within the valuation context it would be better to identify assets that are similar to the ones held by the acquiree company so that the values can be compared. Trying to get a value that would be the nearest to the market price would mean that the valuation of a particular portfolio, or a divestiture in an entity, would happen at an agreeable price that fits into the normal distribution.

In one sense, we are indeed using the relative valuation in a limited approach when we speak about expected market returns, or when we are adopting an index-based comparative. The more the asset pricing gets correlated to the similar assets in the market, the more inclusive it gets. Thus, when we are comparing bonds, the closer the YTM of the bond to the government index of return, the more credible it gets when it comes to pricing.

The Relative valuation, also referred to as 'Valuation by multiples,' uses financial ratios to derive at the desired metric (referred to as the 'multiple') and then compares the same to that of comparable firms. Comparable firms would mean the ones having similar asset and risk dispositions and assumed to continue to do so over the comparison period. In the process, there may be extrapolations set to the desired range to achieve the target set.

OTHER APPROACHES TO VALUE MEASUREMENT

(A) CONTEMPORARY APPROACHES TO VALUATION

Price per page visited
Price per subscriber'
DCF model (Discounted Cash Flow)
Goodwill' based approach
Price Earnings Ratio (PER)
LBOs (Leveraged Buy Outs)

Question: [TYKQ-SM-Old] [Noc-2020-4 Marks]

Differentiate between EVA and MVA.

Answer:

(B) ECONOMIC VALUE ADDED (EVA)

EVA is a holistic method of evaluating a company's financial performance, which means that EVA is used not only as a mere valuation technique, but also to find the economic generates 'value' only if there is a creation of wealth in terms of returns in excess of its cost of capital invested. So if a company's EVA is negative, it means the company is not generating value from the funds invested into the business. Conversely, a positive EVA shows a company is producing value from the funds invested in it.

EVA looks at performance of the 'management' of a company. It tries to make management more accountable to their individual decisions and the impact of decisions on the path to progress of the company. The efficiency of the management gets highlighted in EVA, by evaluating whether returns are generated to cover the cost of capital.

EVA is calculated by 'the excess of returns over the weighted average cost of invested capital'. The formula is as below:

$$\text{EVA} = \text{NOPAT} - (\text{Invested Capital} * \text{WACC}) \quad \text{OR} \quad \text{NOPAT} - \text{Capital Charge}$$

The concept NOPAT (net operating profit after tax) is nothing but EBIT plus tax expense.

After arriving at the correct NOPAT, the next step would be finding the capital charge. This would involve finding out

(a) Invested Capital which would be easy from published financials, as it would be the difference between total assets subtracted by the non-interest bearing current liabilities, like sundry creditors, billing in advance, etc. Care should be taken to do the adjustments for non-cash elements like provision for bad and doubtful debts.

(b) Applying the company's WACC on the invested capital arrived in step (a) Finally the EVA is computed by reducing the capital charge as calculated by applying the WACC on the invested capital from the adjusted NOPAT.

Question: [MTP-Nov-2021]

"Market Vale Added is an attempt to resolve some of the issues involved in Economic Value Added". Explain this statement.

Answer:

(C) MARKET VALUE ADDED (MVA)

The 'MVA' would simply be the current market value of the firm subtracted by the invested capital.

The MVA is also an alternative way to gauge performance efficiencies of an enterprise, albeit from a market capitalization point of view, the logic being that the market will discount the efforts taken by the management fairly.

In contrast, EVA is a derived value added that is for the more discerning investor. Companies with a higher MVA will naturally become the darlings of the share market, and would eventually become 'pricey' from a pure



pricing perspective. In such cases, the EVA may also sometimes have a slightly negative correlation as compared to MVA.

But this will be a short term phenomenon as eventually the gap will get closed by investors themselves. A stock going ex-dividend will exhibit such propensities. We can conclude that the main objective of EVA is thus to show management efficiency in generating returns over and above the hurdle rate of invested capital.

(D) SHAREHOLDER VALUE ANALYSIS (SVA)

NOPAT is a historical figure, albeit a good one though, but cannot fully represent for the future potencies of the entity. More importantly, it doesn't capture the future investment opportunities (or the opportunity costs, whichever way you look). 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:

- Arrive at the Future Cash Flows (FCFs) by using a judicious mix of the 'value drivers'
- Discount these FCFs using the WACC
- Add the terminal value to the present values computed in step (b)
- Add the market value of non-core assets
- Reduce the value of debt from the result in step (d) to arrive at value of equity.

GOING CONCERN AND NON-GOING CONCERN VALUATION

Aspect	Going Concern Valuation	Non-Going Concern Valuation
Basic Assumption	Enterprise is assumed to continue operations for the foreseeable future.	Enterprise has neither the intention nor need to liquidate or curtail operations significantly. If such intention or need exists, financial statements may need a different basis. Disclosure is required.
Asset Valuation	Dependent on the assumption of continuity; traditionally follows historical costing.	Net value realized after disposing of all assets and discharging all liabilities.
Total Value	Known as Total Value; considers the value of assets, future profitability, intangible assets, and goodwill.	Reflects only the liquidation value, which might be lower than the going-concern value.
Comparison of Values	Generally greater than liquidation value as it includes potential for future earnings and intangible assets.	Typically lower than going-concern value due to absence of future earning potential, intangible assets, and goodwill.
Acquisition Premium	Can charge a premium when acquired as a going concern.	Limited ability to charge a premium, as the value is based on liquidation assets.
Employee Impact	Employees continue to work; no layoffs implied.	Liquidation implies layoffs and may create a negative reputation among potential investors.
Investor View	Applied when investors believe the firm has value as a going concern.	Applied when investors perceive the firm as having no value as a going concern.

VALUATION OF DISTRESSED COMPANIES

A company is said to be in distress when the company is unable to meet, or has difficulty paying off, its financial obligations to its creditors, typically due to high fixed costs, illiquid assets, or revenues being sensitive to economic downturns. Such distress can lead to operational distress as increasing costs of borrowings take a toll on the operations of the company as well.

Conventional methods are not usefully deployed when valuing companies in distress as:

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

VALUATION OF START UPS

METHODS OF VALUING A BUSINESS (TRADITIONAL/CONVENTIONAL METHOD)	
(i) Earning/ Cash Flow Approach:	In this approach, estimated cash flows for the foreseeable future are discounted to present value and business is valued accordingly.
(ii) Asset approach:	This approach is generally used when the business is not a going concern viz. during liquidation, untimely losses etc. The assets and liabilities are valued based on their current realisable value and that is considered as value of the business.
(iii) Market approach:	This approach assigns the value of a business based on the value of comparable companies in same/ similar industries, adjusted for their specific parameters.

Why above traditional methods cannot be applied for valuation of start ups?

METHOD	WHY DOES IT FAIL IN CASE OF NEW AGE STARTUPS
Income Approach	A vast majority of startups operate under the assumption of not generating positive cash flows in the foreseeable future. Off late, this business model has been accepted and normalised by the investor community as well. Since there are no or minimal positive cash flows, it isn't easy to value the business correctly.
Asset approach	There are two reasons why this approach does not work for new age startups: (i) Startups have negligible assets because a large chunk of their assets are in the form of intellectual property and other intangible assets. Valuing them correctly is a challenge and arriving at a consensus with investors is even more difficult. (ii) Start ups are new, but usually operate under the going concern assumption; hence their value should not be limited to the realisable value of assets today.
Market approach	New-age startups are disruptors. They generally function in a market without established competitors. Their competition is from other startups working in the same genre. The lack of established competitors indicates that their numbers may be skewed and not be comparable enough to form a base. However, out of the three traditional approaches, we have seen a few elements of the market approach being used for valuing new-age startups, especially during advanced funding rounds.

VALUE DRIVERS FOR STARTUPS:

DRIVERS	IMPACT ON VALUATION
Product	The uniqueness and readiness of the product or service offered by significantly impact the company's valuation. A company that is ready with a fully functional product (or prototype) or service offering will attract higher value than one whose offering is still an 'idea'. Further, market testing and customer responses are key sub-drivers to gauge how good the product is.
Management	More than half of Indian unicorn startups have founders from IIT or IIM. While it may seem unfair prima facie, it is a fact that if the founders are educated from elite schools and colleges, the startup is looked upon more favourably by the investors and stakeholders alike. Accordingly, it is imperative to consider the credentials and balance of the management. For instance, a team with engineers is not as well balanced as a team comprising engineers, finance professionals and MBA graduates. Keeping aside the apparent subjectivity in evaluating the management, the profile of the owners plays a crucial role in valuing the startup.
Traction	Traction is quantifiable evidence that the product or service works and there is a demand for it. The better the traction, the more valuable the startup will be.
Revenue	The more revenue streams, the more valuable the company. While revenues are not mandatory, their existence is a better indicator than merely demonstrating traction and makes the startup more valuable.
Industry attractiveness	The industry's attractiveness plays a vital role in the value of a company. As good as the idea may be, to sustainably scale, various factors like logistics, distribution channels and customer base significantly impacts the startup value. For example, a new-age startup in the tourism industry will be less valuable, as innovative or unique as their offering is if significant lockdowns are expected in the future.
Demand - supply	If the industry is attractive, there will be more demand from investors, making the industry's individual company more valuable.
Competitiveness	The lesser the competitors, the more valuable the startup will be. There is no escaping the first-mover advantage in any industry. While it is easier to convince investors about a business that already exists (for example, it must have been easier for Ola to convince investors when Uber was already running successfully), it also casts an additional burden on the startup to differentiate itself from the competition.

METHODS FOR VALUING STARTUPS

Berkus Approach	The Berkus Approach, created by American venture capitalist and angel investor Dave Berkus, looks at valuing a startup enterprise based on a detailed assessment of five key success factors: (1) Basic value, (2) Technology, (3) Execution, (4) Strategic relationships in its core market, and (5) Production and consequent sales. A detailed assessment is carried out evaluating how much value the five critical success factors in quantitative measure add up to the total value of the enterprise. Based on these numbers, the startup is valued. This method caps pre-revenue valuations at \$2 million and post-revenue valuations at \$2.5 million. Although it doesn't consider other market factor, the limited scope is useful for businesses looking for an uncomplicated tool.
Cost-to-Duplicate Approach	The Cost-to-Duplicate Approach involves taking into account all costs and expenses associated with the startup and its product development, including the purchase of its physical assets. All such expenses are considered determine the startup's fair market value based on all the expenses. This approach is often criticized for not focusing on the future revenue projections or the assets of the startup.

Comparable Transactions Method	With the traditional market approach, this approach is lucrative for investors because it is built on precedent. The question being answered is, “How much were similar startups valued at?” For instance, imagine XYZ Ltd., a logistics startup, was acquired for Rs 560 crores. It had 24 crore, active users. That’s roughly Rs 23 per user. Suppose you are valuing ABC Ltd, another logistics startup with 1.75 crore users. ABC Ltd. has a valuation of about Rs 40 crores under this method. With any comparison model, one needs to factor in ratios or multipliers for anything that is a differentiating factor. Examples would be proprietary technologies, intangibles, industry penetration, locational advantages, etc. Depending on the same, the multiplier may be adjusted.
Scorecard Valuation Method	The Scorecard Method is another option for pre-revenue businesses. It also works by comparing the startup to others already funded but with added criteria. First, we find the average pre-money valuation of comparable companies. Then, we consider how the business stacks up according to the following qualities. • Strength of the team: 0-30% • Size of the opportunity: 0-25% • Product or service: 0-15% • Competitive environment: 0-10% • Marketing, sales channels, and partnerships: 0-10% • Need for additional investment: 0-5% • Others: 0-5% Then we assign each quality a comparison percentage. Essentially, it can be on par (100%), below average (<100%), or above average (>100%) for each quality compared to competitors/industry. For example, the marketing team has a 150% score because it is thoroughly trained and has tested a customer base that has positively responded. You’d multiply 10% by 150% to get a factor of .15. This exercise is undertaken for each startup quality and the sum of all factors is computed. Finally, that sum is multiplied by the average valuation in the business sector to get a pre-revenue valuation.
First Chicago Method	This method combines a Discounted Cash Flow approach and a market approach to give a fair estimate of startup value. It works out: • Worst-case scenario • Normal case scenario • Best-case scenario Valuation is done for each of these situations and multiplied with a probability factor to arrive at a weighted average value.
Venture Capital Method	As the name suggests, venture capital firms have made this famous. Such investors seek a return equal to some multiple of their initial investment or will strive to achieve a specific internal rate of return based on the level of risk they perceive in the venture. The method incorporates this understanding and uses the relevant time frame in discounting a future value attributable to the firm. The post-money value is calculated by discounting the rate representing an investor’s expected or required rate of return. The investor seeks a return based on some multiple of their initial investment. For example, the investor may seek a return of 10x, 20x, 30x, etc., their original investment at the time of exit. New-age startups are disruptors in their own right and a necessary tool for global innovation and progress. By their very nature, startups disrupt set processes and industries to add value. In that process, they transcend traditional indicators of success like revenues, profitability, asset size, etc. Accordingly, it is no mean feat to uncover the actual value of a startup.

While the traditional methods fall short, there is no shortage of new innovative methods used to value startups based on their value drivers. However, the valuation of a startup is much more than the application of ways – it is about understanding the story of the future trajectory and communicating that narrative using substantial numbers.

VALUATION OF DIGITAL PLATFORMS

A digital platform is a software based online infrastructure that facilitates interactions and transactions between users. Principally platforms are built to facilitate many to many interactions. A few illustrations based on the kind of services provided are as under:

CATEGORY	DESCRIPTIONS
Marketplace	Multiple buyers are matched to multiple suppliers. For example: Booking.com connects guests to hotels, while Uber links travelers to drivers, Amazon connects sellers and buyers through its platform.
Search engine	Multiple people looking for information are matched to multiple sources of information. As a search request triggers the system to actively seek out the desired information, it is also called a search engine. For example: Google, Bing, and Baidu
Repository	Multiple suppliers 'deposit' their materials into a type of library, to be retrieved by users at a later moment. For example: Spotify, YouTube, GitHub
Digital communication	Multiple users to send messages and/or documents to a variety of other people, or interact in real time via voice as well as video. For example: Whatsapp, Microsoft Teams, Telegram, Slack etc are internet-based communication platforms.
Digital community	On a digital community platform, people who want to remain virtually connected for a longer period of time can find each other and interact. For example: Facebook lets one build one's own network of friends, LinkedIn plays a similar role in the business context.
Payments Platform	On a digital payment platform, matching takes place between those owing money and those wanting to be paid. For example: Paytm, GPay, are directed at online consumers and facilities payments across vendors.

IMPACT OF ESG ON VALUATION

The impact of each factor can be incorporated in computation of expected cash flows:

(i) E of ESG:	The risk of this factor (Environment) can be incorporated by carrying out 2-degree scenario analysis i.e. if temperature of the plant is increased by 2 degrees. Similarly, adjustment in cash flows can be made by considering carbon points.
(ii) S of ESG:	The risk of this factor (Social) can be considered by adjusting the impact of social measures cost on the revenue such as better labour working conditions, CSR, and other welfare measures for the various stakeholders.
(iii) G of ESG:	The risk of this factor (Governance) can be considered by adjusting the impact of poor governance on revenue in the form of penalty, fines, taxes etc.

IMORTANT NOTES

This image shows a single sheet of white paper with horizontal blue ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Chapter-13

MERGER ACQUISITION & CORPORATE RESTRUCTURING

Contents

Question-1 [Nov-2012-Old-4M] [TYKQ-SM-New]	2
Explain synergy in the context of Mergers and Acquisitions.	2
Question-2 [Nov-2003-Old -8M] [May-2007-Old -4M]	2
Explain the term 'Buy-Outs'.....	2
Write brief notes on Leveraged Buy-Outs (LBO).....	2
What is difference between management buy out and leveraged buy out ? State the purpose of leveraged buyout with help of an example [RTP-Aug-2020-New]	2
Question-3 [May-2006-Old-3M] [Nov-2011-Old-4M] [Nov-2010-Old-4M] [Nov-2014-Old-4M] [TYKQ-SM-New]	3
What is take over by reverse bid?	3
What is reverse merger?	3
Question-4 [Nov-2008-Old -5M] [May-2013-Old -4M]	3
Write a short note on Financial restructuring.....	3
Question-5 [Nov-2013-Old -4M] [TYKQ-SM-New] [MTP-May-2021]	4
What is an equity curve out? How does it differ from a spin off?	4
Question-6 [May-2016-Old -4M] [TYKQ-SM-New]	4
Write short notes on Horizontal merger and Vertical merger.	4
Question 7 [PM-Old] [Nov-2018-Old-4M]	4
Explain the term "Demerger".....	4
Question 8 [RTP-Nov-2022]	4
Explain different forms of divestitures/divestment/demerger.....	4
Question 9 [RTP-May-2022].....	5
Unrelated companies come together to form an entity. What this relationship is called? Discuss briefly the features of this entity.....	5
Question 10 [RTP-Nov-2021]	6
Can a company with no commercial operations raise capital via an IPO? Discuss.	6
Question 11 [MTP-May-2023]	6
Explain some of the 'sell-side' imperatives in Mergers & Acquisitions.....	6
Question 12 [MTP-Nov-2022].....	6
Despite the fact there may be some degree of overlapping in one or more common factors of unrelated Companies come together to form an entity. EXPLAIN.....	6

Question-1 [Nov-2012-Old-4M] [TYKQ-SM-New]

Explain synergy in the context of Mergers and Acquisitions.

Answer:

⇒ Synergy May be defined as follows:

$$V(AB) > V(A) + V(B). \text{ [Where V indicates Value of Company]}$$

In other words, the combined value of two firms or companies shall be more than their individual value. This may be result of complimentary services economics of scale or both.

⇒ 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 reason for synergy benefits. The main reason is that, the large scale production results in lower average cost of production e.g. reduction in overhead costs on account of sharing of central services such as accounting and finances, Office executives, top level management, legal, sales promotion and advertisement etc.

⇒ 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 to bulk transactions.

Question-2 [Nov-2003-Old -8M] [May-2007-Old -4M]

Explain the term 'Buy-Outs'.

Or,

Write brief notes on Leveraged Buy-Outs (LBO).

Or,

What is the difference between management buy out and leveraged buy out ? State the purpose of leveraged buyout with help of an example [RTP-Aug-2020-New]

Answer:

⇒ A buyout involves two entities, the acquirer and the target company. The acquirer seeks to gain controlling interest in the company being acquired normally through purchase of shares.

⇒ Buy-outs are one of the most common forms of privatization, offering opportunities for enhancing the performances of parts of the public sector, widening employee ownership and giving managers and employees incentives to make best use of their expertise in particular sectors

⇒ There are two common types of buy-outs:

- (i) Leveraged Buyouts (LBO) and
- (ii) Management Buy-outs (MBO)

(i) Leveraged Buyouts (LBO):

An acquisition of a company or a division of another company which is financed entirely or partially (50% or more) using borrowed funds is termed as a leveraged buyout. The target company no longer remains public after the leveraged buyout; hence the transaction is also known as going private. The deal is usually secured by the acquired firm's physical assets.

(ii) Management Buy-outs (MBO):

Buyouts initiated by the management team of a company are known as a management buyout. In this type of acquisition, the company is bought by its own management team.

MBOs are considered as a useful strategy for exiting those divisions that does not form part of the core business of the entity.

⇒ Internationally, the two most common sources of buy-out operations are divestment of parts of larger groups and family companies facing succession problems. Corporate groups may seek to sell subsidiaries as part of a planned strategic disposal programme or more forced reorganization in the face of parental financing problems. Public companies have, however, increasingly sought to dispose of subsidiaries through an auction process partly to satisfy shareholder pressure for value maximization.

⇒ In recessionary periods, buy-outs play a big part in the restructuring of a failed or failing businesses and in an environment of generally weakened corporate performance often represent the only viable purchasers when parents wish to dispose of subsidiaries.

Purpose of LBO with Example:

The intention behind an LBO transaction is to improve the operational efficiency of a firm and increase the volume of its sales, thereby increasing the cash flow of the firm. This extra cash flow generated will be used to pay back the debt in LBO transaction.

After an, LBO the target entity is managed by private investors, which makes it easier to have a close control of its operational activities. The LBOs do not stay permanent. Once the LBO is successful in increasing its profit margin and improving its operational efficiency and the debt is paid back, it will go public again.

Companies that are in a leading market position with proven demand for product, have a strong management team, strong relationships with key customers and suppliers and steady growth are likely to become the target for LBOs. In India the first LBO took place in the year 2000 when Tata Tea acquired Tetley in the United Kingdom. The deal value was ₹2135 crores out of which almost 77% was financed by the company using debt. The intention behind this deal was to get direct access to Tetley's international market. The largest LBO deal in terms of deal value (7.6 Billion) by an Indian company is the buyout of Corus by Tata Steel.

Question-3 [May-2006-Old-3M] [Nov-2011-Old-4M] [Nov-2010-Old-4M] [Nov-2014-Old-4M] [TYKQ-SM-New]

What is take over by reverse bid?

Or,

What is 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 takeover, 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:
 - (i) The assets of the transferor company are greater than the transferee company;
 - (ii) Equity capital to be issued by the transferee company pursuant to the acquisition exceeds its original issued capital, and
 - (iii) 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:
 - (1) When the acquired company (big company) is a financially weak company
 - (2) When the acquirer (the small company) already holds a significant proportion of shares of the acquired company (small company)
 - (3) 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-4 [Nov-2008-Old -5M] [May-2013-Old -4M]

Write a short note on Financial restructuring.

Answer:

- ⇒ Financial restructuring, is carried out internally in the firm with the consent of its various stakeholders. Financial restructuring is a suitable mode of restructuring of corporate firms that have incurred accumulated sizable losses for / over a number of years.
- ⇒ As a sequel, the share capital of such firms, in many cases, gets substantially eroded / lost; in fact, in some cases, accumulated losses over the years may be more than share capital, causing negative net worth. Given such a dismal state of financial affairs, a vast majority of such firms are likely to have a dubious potential for liquidation.

⇒ Financial restructuring is one such a measure for the revival of only those firms that hold promise/ prospects for better financial performance in the years to come. To achieve the desired objective, 'such firms warrant / merit a restart with a fresh balance sheet, which does not contain past accumulated losses and fictitious assets and shows share capital at its real/true worth.

Question-5 [Nov-2013-Old -4M] [TYKQ-SM-New] [MTP-May-2021]

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.

Question-6 [May-2016-Old -4M] [TYKQ-SM-New]

Write short notes on Horizontal merger and Vertical merger.

Answer:

Horizontal Merger:

The two companies which have merged are in the same industry, normally the market share of the new consolidated company would be larger and it is possible that it may move closer to being a monopoly or a near monopoly to avoid competition.

Vertical Merger:

This merger happens when two companies that have 'buyer-seller' relationship (or potential buyer-seller relationship) come together

Question 7 [PM-Old] [Nov-2018-Old-4M]

Explain the term "Demerger".

Answer:

Demerger:

- The word 'demerger' is defined under the Income-tax Act, 1961. It refers to a situation, where pursuant to a scheme for reconstruction/restructuring, an 'undertaking' is transferred or sold to another purchasing company or entity. The important point is that even after demerger; the transferring company would continue to exist and may do business.
- Demerger is used as a suitable scheme in the following cases:
 - ⇒ Restructuring of an existing business
 - ⇒ Division of family-managed business
 - ⇒ Management 'buy-out'.
- While under the Income Tax Act, there is recognition of demerger only for restructuring as provided for under sections 391 – 394 of the Companies Act, in a larger context, demerger can happen in other situations also.

Question 8 [RTP-Nov-2022]

Explain different forms of divestitures/divestment/demerger.

Answer:

Different ways of divestment or demerger or divestitures are as follows:

(a) 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. In the late 1980s and early 1990s, corporate raiders used debt to finance acquisitions.

(b) Spin-off: In this case, a 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 spin-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.

(c) Split-up: This involves breaking up of the entire firm into a series of spin off (by creating separate legal entities). The parent firm no longer legally exists and only the newly created entities survive. For instance, a corporate firm has 4 divisions namely A, B, C, D. All these 4 divisions shall be split-up to create 4 new corporate firms with full autonomy and legal status. 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.

(d) Equity Carve outs: This is like spin off, however, some shares of the new company are sold in the market by making a public offer, so this brings cash. More and more companies are using equity carve-outs to boost shareholder value. A parent firm makes a subsidiary public through an initial public offering (IPO) of shares, amounting to a partial sell-off. A new publicly listed company is created, but the parent keeps a controlling stake in the newly traded subsidiary. A carve-out is a strategic avenue a parent firm may take when one of its subsidiaries is growing faster and carrying higher valuations than other businesses owned by the parent. A carve-out generates cash because shares in the subsidiary are sold to the public, but the issue also unlocks the value of the subsidiary unit and enhances the parent's shareholder value.

Question 9 [RTP-May-2022]

Unrelated companies come together to form an entity. What this relationship is called? Discuss briefly the features of this entity.

Answer:

Unrelated companies come together to form an entity. Such relationship is called conglomerate merger. Such mergers involve firms engaged in unrelated type of business operations. In other words, the business activities of acquirer and the target are neither related to each other horizontally (i.e., producing the same or competing products) nor vertically (having relationship of buyer and supplier).

Features:

- ❖ In a pure conglomerate merger, there are no important common factors between the companies in production, marketing, research and development and technology.
- ❖ There may however be some degree of overlapping in one or more of these common factors. Such mergers are in fact, unification of different kinds of businesses under one flagship company.
- ❖ The purpose of merger remains utilization of financial resources, enlarged debt capacity and also synergy of managerial functions.

Question 10 [RTP-Nov-2021]

Can a company with no commercial operations raise capital via an IPO? Discuss.

Answer:

Despite its apparent absurdity, it is a reality that a company without commercial operations can launch an IPO, particularly through Special Purpose Acquisition Companies (SPACs). SPACs are entities formed to raise funds through an IPO for acquiring an unidentified target. The raised funds are held in escrow until an acquisition is made, with shareholders having the option to redeem their shares if they disapprove of the proposed merger.

In India, the absence of a specific regulatory framework poses challenges for SPAC transactions. The Companies Act, 2013, stipulates striking off the names of companies not commencing operations within a year, conflicting with the typical 2 to 3 years SPACs take to identify and perform due diligence on a target. SEBI does not currently accept SPACs under its eligibility criteria for public listing, but it is planning to develop a framework for them.

The International Financial Services Centres Authority (IFSCA) has released a consultation paper to define parameters for SPACs in Gujarat International Finance Tec-City. SPACs offer advantages over traditional IPOs, such as easier access to capital and a streamlined fundraising process. However, challenges arise during the merger process, including complex accounting requirements and the need to swiftly transition to operating as a public company.

While SPACs expedite fundraising, they can be more expensive than traditional IPOs, and investors' money held in a SPAC trust may not earn a suitable return for up to two years. Despite these challenges, SPACs present an alternative avenue for companies seeking to go public.

Question 11 [MTP-May-2023]

Explain some of the 'sell-side' imperatives in Mergers & Acquisitions.

Answer:

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

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

Question 12 [MTP-Nov-2022]

Despite the fact there may be some degree of overlapping in one or more common factors of unrelated Companies come together to form an entity. EXPLAIN.

Answer:

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

Chapter - 14

STARTUP FINANCE

Contents

1. THE BASICS OF STARTUP FINANCING	3
2. SOME OF THE INNOVATIVE WAYS TO FINANCE A STARTUP	3
3. PITCH PRESENTATION	4
4. CONCEPT OF UNICORN	7
5. MODES OF FINANCING FOR STARTUPS.....	7
(I) BOOTSTRAPPING	7
(II) ANGEL INVESTORS	8
(III) VENTURE CAPITAL FUNDS	9
6. STARTUP INDIA INITIATIVE	12
7. Why India became such a sustainable environment for start-ups to thrive in.	13
8. SUCCESSION PLANNING IN BUSINESS	14

STARTUP FINANCE



Modes of Financing for Startups

(i)	Personal financing
(ii)	Personal credit lines
(iii)	Family and friends
(iv)	Peer-to-peer lending
(v)	Crowdfunding
(vi)	Microloans
(vii)	Vendor financing
(viii)	Purchase order financing
(ix)	Factoring accounts receivables

Modes of Financing for Startups

(i)	Introduction
(ii)	Team
(iii)	Problem
(iv)	Solution
(v)	Marketing/Sales
(vi)	Projections or Milestones
(vii)	Competition
(viii)	Business Model
(ix)	Financing

Modes of Financing for Startups

(i)	Bootstrapping
	(a) trade credit
	(b) factoring
	(c) leasing
(ii)	Angel investors
(iii)	Venture capital funds

Modes of Financing for Startups

The definition of startup was provided which is applicable only in case of Government Schemes. Start-up means an entity, incorporated or registered in India:

- ⇒ Not prior to five years,
- ⇒ With annual turnover not exceeding ₹25 crore in any preceding financial year, and
- ⇒ Working towards innovation, development, deployment or commercialization of new products, processes or services driven by technology or intellectual property.

THE BASICS OF STARTUP FINANCING

Question: [May-2018-MTP] [RTP-Nov-2019] [MTP-Nov-2019-6M]

Compare & contrast startup & entrepreneurship. Describe priorities & challenges which startups in India are facing.

Answer:

Startup financing means some initial infusion of money needed to turn an idea (by starting a business) into reality.

Differences between a startup and entrepreneurship.

Startups 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 startup firm. |
| (ii) | The main aim of startup is to build a concern, conceptualize the idea which it has developed into a reality and build a product or service. On the other hand, the major objective of an already established entrepreneurship concern is to attain opportunities with regard to the resources they currently control. |
| (iii) | A startup generally does not have a major financial motive whereas an established entrepreneurship concern mainly operates on financial motive. |

Priorities and challenges which startups in India are facing

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

SOME OF THE INNOVATIVE WAYS TO FINANCE A STARTUP

Question: [TYKQ-SM] [May-2019-4M] [MTP-Nov-2022]

Explain some of the sources for funding a startup.

Question: [RTP-Aug-2020] [MTP-May-2019-6M] [MTP-Nov-2020]

What are some Innovative ways to finance a start up?

Question: [Jan-2021-4 Mark]

Non-bank Financial Sources are becoming popular to finance Start-ups. Discuss.

Question: [May-2023-4 Mark]

Personal Financing is one of the innovative ways to finance a startup. Discuss any four other methods.

Question: [RTP-Nov-2021]

Mr. R has completed his studies and wants to start his new online business. For a successful online business there are various expenditure costs with regards to advertisement & application development. To make the business successful he wants to raise funds. Explain some of the innovative sources for funding a start-up.

Question: [MTP-May-2023]

How Peer to Peer funding different from Crowd Funding? [Hint: Refer point (iv) & (v)]

Answer:

Every startup needs access to capital, whether for funding product development, acquiring machinery and inventory, or paying salaries to its employees. Most entrepreneurs think first of bank loans as the primary source of money, only to find out that banks are really the least likely benefactors for startups. So, innovative measures include maximizing non-bank financing.

Here are some of the sources for funding a startup:

(i)	Personal financing	It may not seem to be innovative but you may be surprised to note that most budding entrepreneurs never thought of saving any money to start a business. This is important because most of the investors will not put money into a deal if they see that you have not contributed any money from your personal sources.
(ii)	Personal credit lines	One qualifies for personal credit line based on one's personal credit efforts. Credit cards are a good example of this. However, banks are very cautious while granting personal credit lines. They provide this facility only when the business has enough cash flow to repay the line of credit.
(iii)	Family and friends	These are the people who generally believe in you, without even thinking that your idea works or not. However, the loan obligations to friends and relatives should always be in writing as a promissory note or otherwise.
(iv)	Peer-to-peer lending	In this process group of people come together and lend money to each other. Peer to peer to lending has been there for many years. Many small and ethnic business groups having similar faith or interest generally support each other in their start up endeavors.
(v)	Crowdfunding	Crowdfunding is the use of small amounts of capital from a large number of individuals to finance a new business initiative. Crowdfunding makes use of the easy accessibility of vast networks of people through social media and crowdfunding websites to bring investors and entrepreneurs together.
(vi)	Microloans	Microloans are small loans that are given by individuals at a lower interest to a new business venture. These loans can be issued by a single individual or aggregated across a number of individuals who each contribute a portion of the total amount.
(vii)	Vendor financing	Vendor financing is the form of financing in which a company lends money to one of its customers so that he can buy products from the company itself. Vendor financing also takes place when many manufacturers and distributors are convinced to defer payment until the goods are sold. This means extending the payment terms to a longer period for e.g. 30 days payment period can be extended to 45 days or 60 days. However, this depends on one's credit worthiness and payment of more money.
(viii)	Purchase order financing	The most common scaling problem faced by startups is the inability to find a large new order. The reason is that they don't have the necessary cash to produce and deliver the product. Purchase order financing companies often advance the required funds directly to the supplier. This allows the transaction to complete and profit to flow up to the new business.
(ix)	Factoring accounts receivables	In this method, a facility is given to the seller who has sold the good on credit to fund his receivables till the amount is fully received. So, when the goods are sold on credit, and the credit period (i.e. the date upto which payment shall be made) is for example 6 months, factor will pay most of the sold amount upfront and rest of the amount later.

PITCH PRESENTATION

Question: [TYKQ-SM] [MTP-May-2022]

What do you mean by Pitch Presentation in context of startup Business?

Question: [July-2021-4 Marks] [MTP-Nov-2022]

Explain Pitch Presentation. List the methods for approaching a Pitch Presentation.

Question: [MTP-May-2020]

Explain the basic documents that are required to make up Financial Presentations during Pitch Presentation.



Question: [MTP-Nov-2023]

During Pitch Presentation to convince the investors to put money into the proposed business how promoters deal with following points:

(i) Problem (ii) Solution (iii) Marketing/Sales (iv) Business Model

Answer:

Pitch deck presentation is a short and brief presentation (not more than 20 minutes) to investors explaining about the prospects of the company and why they should invest into the startup business. So, pitch deck presentation is a brief presentation basically using PowerPoint to provide a quick overview of business plan and convincing the investors to put some money into the business.

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

Here, some of the methods have been highlighted below as how to approach a pitch presentation:

(i)	Introduction	To start with, first step is to give a brief account of yourself i.e. who are you? What are you doing? But care should be taken to make it short and sweet. Also, 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	The next step is to introduce the audience the people behind the scenes. The reason is that the investors will want to know the people who are going to make the product or service successful. Moreover, the investors are not only putting money towards the idea but they are also investing in the team. Also, an attempt should be made to include the background of the promoter, and how it relates to the new company. Moreover, if possible, it can also be highlighted that the team has worked together in the past and achieved significant results.
(iii)	Problem	Further, the promoter should be able to explain the problem he is going to solve and solutions emerging from it. Further the investors should be convinced that the newly introduced product or service will solve the problem convincingly. For instance, when Facebook was launched in 2004, it added some new features which give it a more professional and lively look in comparison to Orkut which was there for some time. It enabled Facebook to become an instant hit among the people. Further, customers have no privacy while using Orkut. However, in Facebook, you can view a person's profile only if he adds you to his list. These simple yet effective advantages that Facebook has over Orkut make it an extremely popular social networking site.
(iv)	Solution	It is very important to describe in the pitch presentation as to how the company is planning to solve the problem. For instance, when Flipkart first started its business in 2007, it brought the concept of ecommerce in India. But when they started, payment through credit card was rare. So, they introduced the system of payment on the basis of cash on delivery which was later followed by other e-commerce companies in India.
(v)	Marketing/ Sales	This is a very important part where investors will be deeply interested. The 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	It is true that it is difficult to make financial projections for a startup concern. 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 that make up a business's financial statements i.e. Income statement, Cash flow statement, & Balance sheet.
(vii)	Competition	Every business organization has competition even if the product or service offered is new and unique. It is 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, there complete details like name of the organization, acquisition prices etc. should be also be highlighted.
(viii)	Business Model	The term business model is a wide term denoting core aspects of a business including purpose, business process, target customers, offerings, strategies, infrastructure, organizational structures, sourcing, trading practices, and operational processes and policies including culture.
(ix)	Financing	If a startup business firm has raised money, it is preferable to talk about how much money has already been raised, who invested money into the business and what they did about it. If no money has been raised till date, an explanation can be made regarding how much work has been accomplished with the help of minimum funding that the company is managed to raise. It is true that investors like to see entrepreneurs who have invested their own money. If a promoter is pitching to raise capital he should list how much he is looking to raise and how he intend to use the funds.

Question: [MTP-Nov-2021] [MTP-May-2021]

Explain the term 'Business Model' with the help of an illustration.

Answer:

The term business model is a wide term denoting core aspects of a business including purpose, business process, target customers, offerings, strategies, infrastructure, organizational structures, sourcing, trading practices, and operational processes and policies including culture.

Further, as per Investopedia, a business model is the way in which a company generates revenue and makes a profit from company operations. Analysts use the term gross profit as a way to compare the efficiency and effectiveness of a firm's business model. Gross profit is calculated by subtracting the cost of goods sold from revenues. A business model can be illustrated with the help of an example. There are two companies – company A and company B. Both the companies are engaged in the business of renting movies. Prior to the advent of internet both the companies rent movies physically. Both the companies made ₹ 5 crore as revenues. Cost of goods sold was ₹ 4 crore. So, the companies made ₹ 1 crore as gross profit. After the introduction of internet, company A started to offer movies online instead of renting or selling it physically. This change affected the business model of company A positively. Revenue is still ₹ 5 crore but the significant part is that cost of goods sold is now ₹ 2 crore only. This is because online sales lead to significant reduction of storage and distribution costs. So, the gross profit increases from 20% to 60%.

Therefore, Company A isn't making more in sales, but it figured out a way to revolutionize its business model, which greatly reduces costs. Managers at company A have an additional 40% more in margin to play with than managers at company A. Managers at company A have little room for error and they have to tread carefully.

CONCEPT OF UNICORN

Unicorn is a privately held start-up company which has achieved a valuation US\$ 1 billion. This term was coined by venture capitalist Aileen Lee, first time in 2013. Unicorn, a mythical animal represents the statistical rarity of successful ventures:

Definition	A start-up is referred as a Unicorn if it has following features: (i) A privately held start-up. (ii) Valuation of start-up reaches US\$ 1 Billion. (iii) Emphasis is on the rarity of success of such start-up. (iv) Other common features are new ideas, disruptive innovation, consumer focus, high on technology etc.
	However, it is important to note that in case the valuation of any start -up slips below US\$ 1 billion it can lose its status of 'Unicorn'. Hence a start-up may be Unicorn at one point of time and may not be at another point of time.
First Unicorn in India	• In September 2011, InMobi, an Indian ad-tech startup, achieved unicorn status by securing a \$200 million investment from SoftBank, valuing the company at over \$1 billion. This marked India's first unicorn. • InMobi, founded in 2007, took four years to reach this milestone. • In 2018, Udaan, a B2B e-commerce marketplace, became the fastest-growing startup in India, becoming a unicorn in just over two years.
Examples of Unicorn in India	Inmobi, Udaan, Flipkart, OLA, Paytm, Zomato, Swiggy, OYO, Bigbasket, Lenskart, Nykaa, Dream 11, Unacademy, Physicswallah, PharmEasy, Tata 1mg, Zerodha etc.

MODES OF FINANCING FOR STARTUPS

Question: [May-2018-RTP] [RTP-Nov-2020] [MTP-May-2021]

Explain the concept of Bootstrapping and describe the various method of bootstrapping used by startups.

Question: [MTP-May-2019-5M] [MTP-Nov-2022]

Discuss bootstrapping as a mode of financing for startup.

Question: [Nov-2020] [Dec-21-4M]

An individual attempts to found and build a company from personal finances or from the operating revenues of the new company. What this method is called? Discuss any two methods.

Question: [Nov-2022-4M]

What do you mean by Bootstrapping? Explain the method of Trade Credit used by the startup firms in bootstrapping.

Answer:

(I) BOOTSTRAPPING

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

A common mistake made by most founders is that they make unnecessary expenses towards marketing, offices and equipment they cannot really afford. So, it is true that more money at the inception of a business leads to complacency and wasteful expenditure. On the other hand, investment by start-ups from their own savings leads to cautious approach. It curbs wasteful expenditures and enable the promoter to be on their toes all the time.

(a) Trade Credit

When a person is starting his business, suppliers are reluctant to give trade credit. They will insist on payment of their goods supplied either by cash or by credit card. However, a way out in this situation is to prepare a well-crafted financial plan. The next step is to pay a visit to the supplier's office. If the business organization is small,

the owner can be directly contacted. On the other hand, if it is a big firm, the Chief Financial Officer can be contacted and convinced about the financial plan.

Communication skills are important here. The financial plan has to be shown. The owner or the financial officer has to be explained about the business and the need to get the first order on credit in order to launch the venture. The owner or financial officer may give half the order on credit and balance on delivery. The 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. So trade credit is one of the most important ways to reduce the amount of working capital one needs. This is especially true in retail operations.

(b) Factoring

This is a financing method where accounts receivable of a business organization is sold to a commercial finance company to raise capital. The factor then got hold of the accounts receivable of a business organization and assumes the task of collecting the receivables as well as doing what would've been the paperwork. Factoring can be performed on a non-notification basis. It means customers may not be told that their accounts have been sold.

However, there are merits and demerits to factoring. The process of factoring may actually reduce costs for a business organization. It can actually reduce costs associated with maintaining accounts receivable such as bookkeeping, collections and credit verifications. If comparison can be made between these costs and fee payable to the factor, in many cases it has been observed that it even proved fruitful to utilize this financing method.

(c) Leasing

Another popular method of bootstrapping is to take the equipment on lease rather than purchasing it. It will reduce the capital cost and also help lessee (person who take the asset on lease) to claim tax exemption. There are advantages for both the startup businessman using the property or equipment (i.e. the lessee) and the owner of that property or equipment (i.e. the lessor.) The lessor enjoys tax benefits in the form of depreciation on the fixed asset leased and may gain from capital appreciation on the property, as well as making a profit from the lease. 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.

(II) ANGEL INVESTORS

Question: [Nov-2018-4M] [MTP-May-2021] [MTP-Nov-2020]

Explain Angel Investors

Question: [May-2018-RTP]

Briefly explain how Angel Investors finance the startup.

Question: [May-2022-4M]

Define Angel Investors, are these only individuals? If not, list the entities.

Question: [MTP-May-2022]

"Angel Investors provide more favourable terms than other lenders". EXPLAIN.

Answer:

- ⇒ Angel investors are also called informal investors, angel funders, private investors, seed investors or business angels
- ⇒ Angel investors invest in small startups or entrepreneurs. Often, angel investors are among an entrepreneur's family and friends. The capital angel investors provide may be a one-time investment to help the business propel or an ongoing injection of money to support and carry the company through its difficult early stages.
- ⇒ Angel investors provide more favourable terms compared to other lenders, since they usually invest in the entrepreneur starting the business rather than the viability of the business. Angel investors are focused on helping startups take their first steps, rather than the possible profit they may get from the business. Essentially, angel investors are the opposite of venture capitalists
- ⇒ 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.

(III) VENTURE CAPITAL FUNDS

Question: [May-2018-New-4M] [MTP-May-2020] [MTP-May-2022]

Explain the advantages of bringing venture capital in the country.

Question: [Nov-2018-MTP-4M]

Explain various stages of venture capital funding.

Question: [Nov-2019-4M] [Dec-2021-4M] [MTP-Nov-2023]

State briefly the basic characteristic of Venture Capital Financing.

Question: [Nov-2022-4M]

Write a short note on Venture Capital Fund. [Hint: Only Introduction]

Question: [RTP-May-2021]

'Venture Capital Financing is a unique way of financing Startup'. Discuss.

Concept of Venture Capital Fund [Nov-2022-4M]

Venture Capital Fund means investment vehicle that manage funds of investors seeking to invest in startup firms and small businesses with exceptional growth potential. Venture capital is money provided by professionals who alongside management invest in young, rapidly growing companies that have the potential to develop into significant economic contributors.

Venture Capitalists generally

- Finance new and rapidly growing companies
- Purchase equity securities
- Assist in the development of new products or services
- Add value to the company through active participation.

Characteristics of Venture Capital Financing:

[Nov-2019-4M]

(i)	Long time horizon	The fund would invest with a long time horizon in mind. Minimum period of investment would be 3 years and maximum period can be 10 years.
(ii)	Lack of liquidity	When VC invests, it takes into account the liquidity factor. It assumes that there would be less liquidity on the equity it gets and accordingly it would be investing in that format. They adjust this liquidity premium against the price and required return.
(iii)	High Risk	VC would not hesitate to take risk. It works on principle of high risk and high return. So, high risk would not eliminate the investment choice for a venture capital.
(iv)	Equity Participation	Most of the time, VC would be investing in the form of equity of a company. This would help the VC participate in the management and help the company grow. Besides, a lot of board decisions can be supervised by the VC if they participate in the equity of a company.

Advantages of bringing VC in the company:

[May-2018-New-4M]

- 1) It injects long- term equity finance which provides a solid capital base for future growth.
- 2) The venture capitalist is a business partner, sharing both the risks and rewards. Venture capitalists are rewarded with business success and capital gain.
- 3) The venture capitalist is able to provide practical advice and assistance to the company based on past experience with other companies which were in similar situations.
- 4) The venture capitalist also has a network of contacts in many areas that can add value to the company.
- 5) The venture capitalist may be capable of providing additional rounds of funding should it be required to finance growth.
- 6) Venture capitalists are experienced in the process of preparing a company for an initial public offering (IPO) of its shares onto the stock exchanges or overseas stock exchange such as NASDAQ.
- 7) They can also facilitate a trade sale.

[May-2023-4M]

"A Limited Partnership Entity, in India, is not recognized for the purpose of Venture Capital Fund." Do you agree? Briefly explain the structure of Venture Capital Fund in India.

[MTP-Nov-2021]

Explain alternatives available to offshore investors for making investments in Venture Capital Funds in India.

Answer:

Structure of Venture Capital Fund in India

(i)	Domestic Funds	Domestic Funds (i.e. one which raises funds domestically) are usually structured as: i) a domestic vehicle for the pooling of funds from the investor, and ii) A separate investment adviser that carries those duties of asset manager. The choice of entity for the pooling vehicle falls between a trust and a company, (India, unlike most developed countries does not recognize a limited partnership), with the trust form prevailing due to its operational flexibility.
(ii)	Offshore Funds	Two common alternatives available to offshore investors are: the "offshore structure" and the "unified structure". Offshore structure: Under this structure, an investment vehicle (an LLC or an LP organized in a jurisdiction outside India) makes investments directly into Indian portfolio companies. Typically, the assets are managed by an offshore manager, while the investment advisor in India carries out the due diligence and identifies deals Unified Structure: 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.

Stages of funding for VC Funding: [Nov-2018-MTP] [Jan-2021-4 Mark] [July-2021-4 Marks]
[RTP-May-2023] [MTP-Nov-2021]

Financial Stage	Meaning	Period (Funds locked in years)	Risk Perception	Activity to be financed
Seed Money	Low level financing needed to prove a new idea.	7 -10	Extreme	For supporting a concept or idea or R&D for product development
Start Up	Early stage firms that need funding for expenses associated with marketing and product development.	5-9	Very High	Initializing prototypes operations or developing
First Stage/Round	Early sales and manufacturing funds.	3-7	High	Start commercials marketing production and
Second Stage/ Round	Working capital for early stage companies that are selling product, but not yet turning in a profit.	3-5	Sufficiently high	Expand market and growing working capital need
Third Stage/ Round	Also called Mezzanine financing, this is expansion money for a newly profitablen company.	1-3	Medium	Market expansion, acquisition & product development for profit making company
Fourth Stage/ Round	Also called bridge financing, it is intended to finance the "going public "process	1-3	Low	Facilitating public issue

VC Investment Process

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

(1) Deal Origination	VC operates directly or through intermediaries. Mainly many practicing Chartered Accountants would work as intermediary and through them VC gets the deal. Before sourcing the deal, the VC would inform the intermediary or its employees about the following so that the sourcing entity does not waste time: ❖ Sector focus ❖ Stages of business focus ❖ Promoter focus ❖ Turn over focus Here the company would give a detailed business plan which consists of business model, financial plan and exit plan. All these aspects are covered in a document which is called Investment Memorandum (IM). A tentative valuation is also carried out in the IM.
(2) Screening	Once the deal is sourced, the same would be sent for screening by the VC. The screening is generally carried out by a committee consisting of senior level people of the VC. Once the screening happens, it would select the company for further processing.
(3) Due Diligence	The screening decision would take place based on the information provided by the company. Once the decision is taken to proceed further, the VC would now carry out due diligence. This is mainly the process by which the VC would try to verify the veracity of the documents taken. This is generally handled by external bodies, mainly renowned consultants. The fees of due diligence are generally paid by the VC. However, in many cases, this can be shared between the investor (VC) and Investee (the company) depending on the veracity of the document agreement.
(4) Deal Structuring <u>[Nov-2023-4 Marks]</u>	Once the case passes through the due diligence, it would now go through the deal structuring. The deal is structured in such a way that both parties win. In many cases, the convertible structure is brought in to ensure that the promoter retains the right to buy back the share. Besides, in many structures to facilitate the exit, the VC may put a condition that promoter has also to sell part of its stake along with the VC. Such a clause is called tag- along clause
(5) Post Investment Activity	In this section, the VC nominates its nominee in the board of the company. The company has to adhere to certain guidelines like strong MIS, strong budgeting system, strong corporate governance and other covenants of the VC and periodically keep the VC updated about certain mile-stones. If milestone has not been met, the company has to give explanation to the VC. Besides, VC would also ensure that professional management is set up in the company.
(6) Exit plan <u>[Nov-2023-4 Marks]</u>	At the time of investing, the VC would ask the promoter or company to spell out in detail the exit plan. Mainly, exit happens in two ways: one way is 'sell to third party (ies)'. This sale can be in the form of IPO or Private Placement to other VCs. The second way to exit is that promoter would give a buy back commitment at a pre agreed rate (generally between IRR of 18% to 25%). In case the exit is not happening in the form of IPO or third party sell, the promoter would buy back. In many deals, the promoter buyback is the first refusal method adopted i.e. the promoter would get the first right of buyback.

Question: [MTP-Nov-2021]

Who are Angel Investors and how they are different from Venture Capitalists.

Answer:

As per Investopedia, Angel investors invest in small startups or entrepreneurs. Often, angel investors are among an entrepreneur's family and friends. The capital angel investors provide may be a one-time investment to help the business propel or an ongoing injection of money to support and carry the company through its difficult early stages.

Angel investors provide more favourable terms compared to other lenders, since they usually invest in the entrepreneur starting the business rather than the viability of the business. Angel investors are focused on helping startups take their first steps, rather than the possible profit they may get from the business. Essentially, angel investors are the opposite of venture capitalists.

Angel investors are also called informal investors, angel funders, private investors, seed investors or business angels. These are affluent individuals who inject capital for startups in exchange for ownership equity or convertible debt. 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.

Though angel investors usually represent individuals, the entity that actually provides the fund may be a limited liability company, a business, a trust or an investment fund, among many other kinds of vehicles.

Angel investors who seed startups that fail during their early stages lose their investments completely. This is why professional angel investors look for opportunities for a defined exit strategy, acquisitions or initial public offerings (IPOs).

STARTUP INDIA INITIATIVE

Question: [May-2022-4M] [Nov-2023-4M] [RTP-Nov-2023]

Enlist the criteria for an entity to be classified as a Startup entity under the Startup India Scheme initiated by the Government of India.

Question: [MTP-May-2023] [MTP-May-2022]

Explain the conditions that are required to be satisfied by an entity to be considered as a Startup vide GSR Notification 127 (E) dated 19th February 2019.

Question: [MTP-May-2021]

What is a startup to avail the benefits of government scheme?

Question: [RTP-Nov-2018]

Explain startup India initiative.

Question: [Nov-2019-4M]

What is a startup to avail the benefits of Government scheme?

Answer:

Start-up India scheme was initiated by the Government of India on 16th of January, 2016. As per Government Notification, an entity shall be considered as a Startup:

- (i) Upto a period of ten years from the date of incorporation/ registration, if it is incorporated as a private limited company (as defined in the Companies Act, 2013) or registered as a partnership firm (registered under section 59 of the Partnership Act, 1932) or a limited liability partnership (under the Limited Liability Partnership Act, 2008) in India.
- (ii) Turnover of the entity for any of the financial years since incorporation/ registration has not exceeded one hundred crore rupees.
- (iii) Entity is working towards innovation, development or improvement of products or processes or services, or if it is a scalable business model with a high potential of employment generation or wealth creation.

Provided that an entity formed by splitting up or reconstruction of an existing business shall not be considered a 'Startup'.

Definition	Startup India scheme was initiated by the Government of India on 16th of January 2016. As per GSR Notification 127 (E) dated 19th February 2019, an entity shall be considered as a Startup: (i) Upto a period of ten years from the date of incorporation/ registration, if it is incorporated as a private limited company (as defined in the Companies Act, 2013) or registered as a partnership firm (registered under section 59 of the Partnership Act, 1932) or a LLP (under the Limited LLP Act, 2008) in India. (ii) Turnover of the entity for any of the financial years since incorporation/ registration has not exceeded one hundred crore rupees.
-------------------	--

	(iii) Entity is working towards innovation, development or improvement of products or processes or services, or if it is a scalable business model with a high potential of employment generation or wealth creation. Provided that an entity formed by splitting up or reconstruction of an existing business shall not be considered a 'Startup'.
	However, it is important to note that in case the valuation of any start-up slips below US\$ 1 billion it can lose its status of 'Unicorn'. Hence a start-up may be Unicorn at one point of time and may not be at another point of time.
First Unicorn in India	• In September 2011, InMobi, an Indian ad-tech startup, achieved unicorn status by securing a \$200 million investment from SoftBank, valuing the company at over \$1 billion. This marked India's first unicorn. • InMobi, founded in 2007, took four years to reach this milestone. • In 2018, Udaan, a B2B e-commerce marketplace, became the fastest-growing startup in India, becoming a unicorn in just over two years.
Examples of Unicorn in India	Inmobi, Udaan, Flipkart, OLA, Paytm, Zomato, Swiggy, OYO, Bigbasket, Lenskart, Nykaa, Dream 11, Unacademy, Physicswallah, PharmEasy, Tata 1mg, Zerodha etc.

Why India became such a sustainable environment for start-ups to thrive in.

In 2016, the Indian government launched the Startup India and StandUp India programs, significantly boosting the start-up ecosystem. Initiatives such as the SIDBI-run Electronic Development Fund (EDF), Mudra Scheme for easy finance, and tax benefits like a 100% tax holiday under section 80-IAC played a crucial role in promoting start-up.

Apart from the support from government, there are quite a few other reasons why India became such a sustainable environment for start-ups to thrive in. Some of the major reasons are:

i.	The Pool of Talent	Our country has a big pool of talent. There are millions of students graduating from colleges and B-schools every year. Many of these students use their knowledge and skills to begin their own ventures, and that has contributed to the startup growth in India. In the past, much of this talent was attracted to only the big companies, but now that is slowly changing.
ii.	Cost Effective Workforce	India is a young country with over 10 million people joining the workforce every year. The workforce is also cost effective. So, compared to some other countries, the cost of setting up and running a business is comparatively lower
iii.	Increasing use of the Internet	India has the world's second-highest population, and after the introduction of affordable telecom services, the usage of internet has increased significantly. It has even reached the rural areas. India has the second-largest internet user base after China, and companies as well as start-ups are leveraging this easy access to the internet.
iv.	Technology	Technology has made the various processes of business very quick, simple and efficient. There have been major developments in software and hardware systems due to which data storage and recording has become an easy task. Indian startups are now increasingly working in areas of artificial intelligence and blockchain technologies which is adding to the growth of businesses.
v.	Variety of Funding Options Available	Traditionally, acquiring funds for a new business involved limited methods like bank loans or borrowing from family and friends. Start-up owners now have access to angel investors, venture capitalists, and seed funding stage investors. Moreover, relaxed Foreign Direct Investment norms and the 100% automatic route in various sectors have facilitated increased foreign funding in the Indian start-up ecosystem.

SUCCESSION PLANNING IN BUSINESS

Succession planning is the process of identifying the critical positions within an organization and developing action plans for individuals to assume those positions. A succession plan identifies future need of people with the skills and potential to perform leadership roles. It is particularly vital for family-owned businesses, often led by non-family members. This strategic approach not only facilitates the availability of qualified personnel for existing positions but also anticipates future needs.

Why is there a need for succession planning?

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

Challenges faced in implementing Succession Planning:

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