NiSM

National Institute of Securities Markets
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Workbook for

NISM-Series-X-B: Investment Adviser (Level 2) Certification Examination

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Certification Examination

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This workbook has been developed to assist candidates in preparing for the National Institute of Securities Markets (NISM) Level 2 Certification Examination for Investment Advisers.

Workbook Version: January 2016

Published by:

National Institute of Securities Markets

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Plot 82, Sector 17, Vashi

Navi Mumbai – 400 703, India

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Foreword

NISM is a leading provider of high end professional education, certifications, training and research in financial markets. NISM engages in capacity building among stakeholders in the securities markets through professional education, financial literacy, enhancing governance standards and fostering policy research. NISM works closely with all financial sector regulators in the area of financial education.

NISM Certification programs aim to enhance the quality and standards of professionals employed in various segments of the financial services sector. NISM's School for Certification of Intermediaries (SCI) develops and conducts certification examinations and Continuing Professional Education (CPE) programs that aim to ensure that professionals meet the defined minimum common knowledge benchmark for various critical market functions.

NISM certification examinations and educational programs cater to different segments of intermediaries focusing on varied product lines and functional areas. NISM Certifications have established knowledge benchmarks for various market products and functions such as Equities, Mutual Funds, Derivatives, Compliance, Operations, Advisory and Research.

NISM certification examinations and training programs provide a structured learning plan and career path to students and job aspirants who wish to make a professional career in the Securities markets. Till May 2015, NISM has certified nearly 4 lakh individuals through its Certification Examinations and CPE Programs.

NISM supports candidates by providing lucid and focused workbooks that assist them in understanding the subject and preparing for NISM Examinations. The book covers all important topics to enhance the quality of investment advisory and related services in the financial services industry. It covers topics related to the structure and performance of securities markets, importance of asset allocation and impact of the market movement on the assets performance. This course teaches practical aspect of product selection, portfolio construction, review and rebalancing based on clients need. The book also discusses the concept of compliance, operations and service elements in investment advice. It will be immensely useful to all those who want to learn about the various aspects of investment advisory domain.

Sandip Ghose
Director

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While the NISM Certification examination will be largely based on material in this workbook, NISM does not guarantee that all questions in the examination will be from material covered herein.

Acknowledgement

This workbook has been developed by NISM in consultation with the Examination Committee for NISM-Series-X-B: Investment Adviser (Level 2) Certification Examination comprising of industry participants, educators and trainers and SEBI officials. NISM gratefully acknowledges the contribution of the committee members.

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About NISM

National Institute of Securities Markets (NISM) was established by the Securities and Exchange Board of India (SEBI), in pursuance of the announcement made by the Finance Minister in his Budget Speech in February 2005.

SEBI, by establishing NISM, articulated the desire expressed by the Government of India to promote securities market education and research.

Towards accomplishing the desire of Government of India and vision of SEBI, NISM delivers financial and securities education at various levels and across various segments in India and abroad. To implement its objectives, NISM has established six distinct schools to cater to the educational needs of various constituencies such as investors, issuers, intermediaries, regulatory staff, policy makers, academia and future professionals of securities markets.

NISM is mandated to implement Certification Examinations for professionals employed in various segments of the Indian securities markets.

NISM also conducts numerous training programs and brings out various publications on securities markets with a view to enhance knowledge levels of participants in the securities industry.

About NISM Certifications

The School for Certification of Intermediaries (SCI) at NISM is engaged in developing and administering Certification Examinations and CPE Programs for professionals employed in various segments of the Indian securities markets. These Certifications and CPE Programs are being developed and administered by NISM as mandated under Securities and Exchange Board of India (Certification of Associated Persons in the Securities Markets) Regulations, 2007.

The skills, expertise and ethics of professionals in the securities markets are crucial in providing effective intermediation to investors and in increasing the investor confidence in market systems and processes. The School for Certification of Intermediaries (SCI) seeks to ensure that market intermediaries meet defined minimum common benchmark of required functional knowledge through Certification Examinations and Continuing Professional Education Programmes on Mutual Funds, Equities, Derivatives Securities Operations, Compliance, Research Analysis, Investment Advice and many more.

Certification creates quality market professionals and catalyzes greater investor participation in the markets. Certification also provides structured career paths to students and job aspirants in the securities markets.

About the Workbook

This workbook has been developed to assist candidates in preparing for the National Institute of Securities Markets (NISM) Level 2 Certification Examination for Investment Advisers. NISM-Series-X-B: Investment Adviser (Level 2) Certification Examination along with the NISM-Series-X-A: Investment Adviser (Level 1) Certification Examination seeks to create a common minimum knowledge benchmark for all associated persons registered as an investment adviser and partners and representatives of investment advisers under SEBI (Investment Advisers) Regulations, 2013 and offering investment advisory services.

The book covers all important topics to enhance the quality of investment advisory and related services in the financial services industry. It covers topics related to the structure and performance of securities markets, importance of asset allocation and impact of the market movement on the assets performance. This course teaches practical aspect of product selection, portfolio construction, review and rebalancing based on clients need. The book also discusses the concept of compliance, operations and service elements in investment advice.

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About the Level 2 Certification Examination for Investment Adviser

NISM-Series-X-B: Investment Adviser (Level 2) Certification Examination along with the NISM-Series-X-A: Investment Adviser (Level 1) Certification Examination seeks to create a common minimum knowledge benchmark for all associated persons registered as an investment adviser and partners and representatives of investment advisers under SEBI (Investment Advisers) Regulations, 2013 and offering investment advisory services.

An associated person shall be required to pass both the levels (i.e. NISM-Series-X-A: Investment Adviser (Level 1) Certification Examination and NISM-Series-X-B: Investment Adviser (Level 2) Certification Examination) to fulfill the requirements under Regulation 7(2) of the SEBI (Investment Advisers) Regulations, 2013.

The certification aims to enhance the quality of investment advisory and related services in the financial services industry.

Examination Objectives

On successful completion of the examination, the candidate should:

- Know the comprehensive financial planning in the context of households to apply the planning elements learnt in Level 1 Certification Examination.
- Understand the structure and performance of securities markets; importance of asset allocation and impact of the market movement on the assets performance.
- Know the practical aspect of product selection, portfolio construction, review and rebalancing based on clients need.
- Know the compliance, operations and service elements in investment advice.

Assessment Structure

The examination consists of 8 caselets with 4 multiple choice questions of 2 marks each per caselet (adding to 64 marks) and 36 multiple choice questions of 1 mark each adding up to 100 marks. The examination should be completed in 2 hours. There is negative marking of 25% of the marks assigned to a question. The passing score for the examination is 60 marks.

How to register and take the examination

To find out more and register for the examination please visit www.nism.ac.in

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CHAPTER 1: UNDERSTANDING SECURITIES MARKETS AND PERFORMANCE

LEARNING OBJECTIVES:

After studying this chapter, you should know about:

- Primary and secondary markets
- Equity and debt market indicators
- Different kind of equity and debt instruments
- Risk and Return from investing in equity and debt instruments
- Derivative markets (Exchange traded and OTC), products and their uses

1.1. Working of the Equity Markets

1.1.1 Primary Markets

Primary market refers to the market where equity shares of a company are issued for the first time to raise resources for the company. New shareholders are able to contribute to the capital of a company by participating in the primary issue of shares by a company. The shares may be issued to public investors in an initial public offer, or to a select group of investors in a private placement.

A public offer is open to three categories of investors:

- Qualified institutional buyers (QIBs) which include Foreign Portfolio Investors (FPIs) and mutual funds, banks and financial institutions, pension funds and insurance funds and other institutional investors;
- High net worth individuals or non-institutional buyers (NIBs) who invest more than Rs 2 lakhs;
- Retail individual investors (including eligible NRIs and HUFs in the name of Karta) who invest upto Rs 2 lakhs in an issue.

The proportion of the issue that has to be offered to these categories is stipulated by regulation.

Primary issue of equity shares can be fresh issue of shares as initial public offer (IPO) or a follow-on public offer (FPO) where additional shares are offered to the public after the IPO or a rights issue where the shares are offered to existing investors (who may or may not be allowed to renounce their rights in favour of third parties). A primary market issuance can also be a private placement, where securities are issued to a defined group of investors. A private placement made by a listed company is called a preferential allotment. A

preferential allotment made to Qualified Institutional Buyers (QIB) is called a Qualified Institutional Placement.

An offer for sale is where shares held by existing investors are offered to public shareholders. For example, in the case of public sector units (PSU) the shares held by the government are offered for sale, reducing the stake of the government and increasing the stake of public shareholders. An offer for sale does not increase or decrease the share capital of the company.

Primary market offerings are subject to regulatory requirements laid down by Securities and Exchange Board of India (SEBI) in the SEBI Issue of Capital and Disclosure Requirements (ICDR) Regulations, 2009 and the provisions of the Companies Act, 2013 and the Companies Act, 1956, as applicable for disclosures and raising capital from the public. They are also subject to RBI regulations as regards issues to non-resident investors and receipt of money from abroad.

The regulations cover the eligibility of a company to make a public issue in terms of networth and track record of profitability, the process of making the issue and the time lines to be adhered to and the usage of the funds raised from the public. A public issue of shares may be credit rated and the rating received disclosed to the public. The regulations also require the issuer to provide information on a continuous basis to enable evaluation of the shares by existing and new investors and to provide a way for investors to make additional investment or exit from the investment through the mechanism of listing.

The company making a public issue of shares has to file with SEBI a document giving all information of the issuer and the proposed issue such as the operations and finances of the company, the current and future projects, the details of the promoters of the company, the proposed use of funds raised and details of the shares being issued such as the number of shares being raised and the price band. This document is called a prospectus. A draft prospectus in the specified format is first filed with SEBI for comments and approval. The modifications, if any, are incorporated before the final prospectus is filed with the Registrar of Companies, SEBI and the stock exchange where the shares are to be listed. The pricing of a public issue may be decided by the issuing company in consultation with the lead managers of the issue in a fixed price offer, or through a bidding process once the offer is open. If the final issue price is not known at the time of filing then an indicative price band for the offer is provided in the prospectus. This document is called the red-herring prospectus, as it does not have a final price.

A public issue of shares may be made at a fixed price decided by the issuer and the lead manager. The rationale for the price so decided is clearly explained in the offer document and will include qualitative factors such as business strengths and future prospects, and quantitative factors such as current and future earnings and operational numbers. The other method of discovering the price is through a book building process in which the issuer

indicates the price band or a base or floor price and investors bid for the desired quantity of shares at a price within the specified band. On closure of the issue, the cut-off price is determined as the price at which the issue gets fully subscribed. All investors who bid at the cut-off price or higher are successful bidders and are allotted shares. Retail investors can bid at 'cut-off' price at the time of making the application which means that they are willing to accept the price discovered in the book building process.

A public issue has opening and closing dates, and is expected to garner the stipulated minimum subscription. A fixed price public issue is open for subscription for 3 to 10 working days while an issue following a book building process is open between 3 to 7 days. If the price band is revised in the issue period, the period available for subscription can be extended by another 3 days. After an issue closes, the company and its merchant bankers, along with the stock exchange where the issue will be listed, decide on the 'basis of allotment'. This represents how proportionate allotment will be made for each category of investors, if the issue is over-subscribed. SEBI's guidelines requires that all retail investors in an issue must receive allotment of atleast one lot (one lot will be the number of shares calculated on the basis of the minimum application value of Rs. 10000 to Rs. 15000). The remaining available shares in the category will be allotted on proportionate basis.

The registrars to an issue process applications from investors in an issue; keep proper record of applications and money received from investors; and assist the issuer in creating investor records, executing the allotment of shares into the demat account of investors, and sending refund orders for partial allotment, and non-allotment. After the allotment process is complete, the shares are listed on the stock exchange and can be traded thereafter.

The price at which shares list and trade on the secondary markets may be at a premium or discount to the issue price. Investors who have been allotted shares can freely trade in the shares as soon as they are listed.

SEBI's regulations provide for a safety net for IPO investors. This is a facility that the issuer may choose to provide the investors. Under this arrangement, an entity identified by the issuer and merchant banker may offer to purchase a maximum of one thousand securities from each original retail resident allotee. Issuers may also choose to allot securities not exceeding 15% of the issue size to an identified stabilizing agent under a green shoe option. The proceeds from this portion is used to provide stability to the price of the securities in the secondary market post-listing. The stabilizing process will be available for a period not exceeding 30 days from the date on which trading permission is given to the securities.

Leveraged investing in an IPO is a short-term investing practice of using borrowed funds to invest with the expectation of making immediate short-term gains from the shares being listed at a premium to the issue price. There is however no assurance of a higher listing price. IPOs can list at a premium or discount to the issue price. Consider the example given below. Investor has incurred Rs. 1500 as borrowing costs.

Bid price (Rs)	100
Number of shares bid for	1,000
Amount needed (Rs)	100,000
Own funds (Rs)	25,000
IPO Margin Finance (Rs)	75,000
Rate of Interest, processing charges on margin finance	2%
Interest, processing charges on margin finance	1,500

Whether investors will make money on the IPO depends on the extent of allotment, and the listing premium. The cost of Rs. 1500 incurred in using borrowed funds is fixed and has to be borne by the investor. The cost per share moves up as number of allotted shares reduces and vice versa. If the issue is heavily oversubscribed, the allotment to each investor can come down. Suppose the investor is allotted only 100 shares then the cost of Rs. 1500 is spread over the 100 shares at Rs. 15 per share. Given an allotment of 100 shares, the issue must list at Rs. 115 (Rs. 100 bid price and Rs. 15 cost) or higher for the investor to recover his investment. At any price below Rs. 115 the investor will make a loss, given an allotment of 100 shares.

Cost of acquisition moves up as % allotment moves down		
No. of shares allotted	**Cost incurred (Bid Price of Rs.100/share and fixed borrowing cost of Rs. 1500)(Rs)**	**Cost per share (Cost incurred/ No. of shares allotted) (Rs)**
1,000	101,500	101.50
900	91,500	101.67
800	81,500	101.88
700	71,500	102.14
600	61,500	102.50
500	51,500	103.00
400	41,500	103.75
300	31,500	105.00

200	21,500	107.50
100	11,500	115.00

1.1.2 Secondary Markets

The secondary market or the stock exchange is the place where shares once issued can be bought or sold between investors. Secondary markets provide liquidity to equity investments so that investors may sell the equity shares they hold or buy more equity shares, at any time.

The listing agreement that a company signs with a stock exchange requires a company to disclose information about its working, financials and other key information that may affect its share price. Such disclosure of information allows the public investors to make informed decisions to buy or sell equity shares.

Stock exchanges are structured to enable liquidity in the listed shares so that investors can sell or buy shares at low transaction costs. However, not all listed shares are liquid. For an equity share to be considered liquid, it needs to be bought and sold in large volumes indicating interest of investors in the company.

Secondary market transactions by investors involve executing the trade and settling the obligations that arise from the transaction. The obligations will involve transfer of funds and securities between the parties to the trade. The stock exchange mechanism provides the facility for conducting the trade on its trading platform and settlement of the transaction through the clearing and settlement system of each stock exchange. The National Stock Exchange (NSE), the Bombay Stock Exchange (BSE) and the Metropolitan Stock Exchange of India Ltd (MSEI), are the leading stock exchanges in India.

Electronic Trading

Modern stock markets are electronically enabled for convergence of investors. Buyers and sellers enter their trades on the trading terminals of their broker which transmits it to the entire trading network of the stock exchange. The system electronically matches buy and sell orders so that buy orders are executed at the price specified or lower and sell orders at the price specified or higher. A price-time priority is followed in executing orders. Buy orders with a higher price are matched first and sell orders with a lower price get priority for execution in the system. Orders with the same price are prioritized on the basis of the time at which the order was entered into the system, with orders entered earlier getting executed first. All bid and ask prices are visible on the trading terminal. However, the identity of the buyer and the seller is not revealed on the screen. Modern markets are thus anonymous. This enables a wide participation and liquidity, which ensures that orders are matched almost instantaneously.

A buy or sell order requires the security to be specified in terms of its security symbol and international security identification number (ISIN), the quantity and the price. The order can be a 'limit order' where the investor specifies the maximum price at which they are willing to buy or the minimum price at which they are willing to sell. Orders can also be placed without a limit price. A 'market order' is an instruction to buy or sell at the best price currently available in the market. Such orders have a greater chance of getting executed than limit price orders. An 'immediate or cancelled' (IOC) order is executed immediately or cancelled and a 'good till cancelled' (GTC) order remains in the system for execution till it is cancelled by the investor. 'Stop loss' order is given to limit the loss in a buy or sell trade by specifying a price to execute an opposite trade.

The orders are placed by investors through their brokers, who in turn place the orders on the trading terminal of the stock exchanges. It is mandatory to deal with a registered stock-broker to buy or sell securities in the stock markets. Investors may also deal through sub-brokers who are registered with member brokers and execute the investors' trades through them. The investor receives confirmation of a trade and its details through a contract note issued by the broker (or purchase or sale note issued by the sub-broker, if a trade is done through a sub-broker).

Clearing Corporation

Buyers of equity shares are expected to give funds for their purchase and sellers are expected to deliver the shares they have sold. This is the pay-in process and has to be completed within the time specified. After the pay-in is completed the pay-out takes place when the buyer receives the securities and the seller receives the funds for shares sold. This process of exchange of funds and shares is called settlement. A clearing corporation takes care of the settlement process. The National Securities Clearing Corporation Ltd (NSCCL) is the clearinghouse for trades done on the NSE; the Indian Clearing Corporation Ltd (ICCL) is the clearinghouse for BSE and Metropolitan Clearing Corporation of India Ltd. (MCCIL) is the clearing house for MSEI.

The clearing corporation acts as the counter party for all trades and settles them without default. To provide such a guarantee, the clearing corporation collects margins from members. These margins comprise of both initial margins (for capital adequacy) and mark-to-market margins that vary based on the marked-to-market open position of a member.

If a member were to default on his commitment, margins are used to make good the losses. Clearing corporations run risk management systems to ensure that adequate margins are collected from members and all trades are settled without default.

At the end of each trading day, concluded trades are received from the exchange by the clearing corporation, which determines the cumulative obligations of each member. It then electronically transfers the data to members.

Net settlement obligation (delivery/receipt positions) of each member is determined after netting and the delivery and receipt obligation of each member is arrived at.

Settlement is completed upon release of pay-out of funds and securities. On the securities pay-in day, delivering members are required to bring in securities to the clearing corporation. On pay-out day the securities are delivered to the respective receiving members. Exceptions may arise because of short delivery on the pay-out day.

If a member is unable to deliver securities due from him, the clearing corporation will announce a buy-in auction, where it would buy the securities due for delivery and deliver the same to the counterparty of the defaulting member. The member's account will be debited for the auction payment.

Settlement Calendar

Securities can be settled in rolling settlement, institutional segment or on a trade-for-trade (TT) basis. Institutional and TT segments settle in T+2 days, on a trade for trade basis. This means every trade has to be settled and positions will not be netted. Most trades are settled on a rolling basis. Placed below is the settlement cycle for rolling settlements on the NSE.

	Activity	**Day**
Trading	Rolling Settlement Trading	T
Clearing	Custodial Confirmation	T+1 working days
	Delivery Generation	T+1 working days
Settlement	Securities and Funds pay in	T+2 working days
	Securities and Funds pay out	T+2 working days
	Valuation Debit	T+2 working days
Post Settlement	Auction	T+2 working days
	Auction settlement	T+3 working days
	Bad Delivery Reporting	T+4 working days
	Rectified bad delivery pay-in and pay-out	T+6 working days
	Re-bad delivery reporting and pickup	T+8 working days
	Close out of re-bad delivery and funds pay-in & pay-out	T+9 working days

Rolling settlement refers to the settlement mechanism where the trades done on a particular day are settled to a pre-defined cycle, currently T+2 on Indian stock exchanges. This means that trades done on day T are settled after two business days. Each day's trade is settled distinct from trades done on other days. On T+1 day, custodians confirm settlement for those trades that have been identified at the time of trade as those for settlement by a custodian. The clearing corporation generates delivery obligations for securities and funds on T+1, for each member, to be settled on T+2 day. On settlement day, if there are any

shortages in securities delivered by a member, the member is debited for these securities at valuation price. This is called valuation debit. On the NSE, the valuation price for a stock is calculated as the closing price of the stock on the trading day immediately preceding the pay-in day. For all short deliveries, an auction is conducted to buy-in the securities. Physical delivery of securities given (as against dematerialized delivery) may result in a defective delivery of securities, which are called bad deliveries. These have to be reported to the clearing house within 2 days from the receipt of the documents and rectified by the delivering member within 2 days. Failure to rectify bad deliveries will lead to the transaction being closed out at the highest price between trading date and closing out date or at 20% higher than the closing price on auction date, whichever is higher.

Margin Trading

Margin trading is a facility provided by members of stock exchanges to their clients to leverage their short term investments in the secondary markets, by providing a borrowing facility for funds. It allows investors to take a larger position than what their own resources would allow, thus increasing their profits if their expectation of price movements came true. For example, if an investor invested Rs. 100 in a stock whose price moves to Rs. 120, the return to the investor is 20%. However, if the investor used Rs. 50 of own funds and Rs. 50 of borrowed funds, the return to the investor if the price moved to Rs. 120 is 40% (assuming no interest to be paid on borrowed funds). However, in reality, there will be an interest cost that the investor has to pay. But as long as the interest cost is lower than the portfolio's return, the leveraged position will make higher returns for the investor.

	Position I	**Position II**
Own Funds	100	50
Borrowed Funds	0	50
Funds Invested	100	100
Return From Portfolio	20%	20%
Returns	20	20
Interest Cost	0	8
Net Profit	20	12
Return to Investor	20%	24%

In the table above, Position II is the leveraged position. As long as the interest cost (calculated at 16% in this example) is lower than the returns from the portfolio (20% in this example), the leveraged position will generate better returns.

Just as trading on margin or leveraged position enhances returns, it also magnifies the losses to the investor.

	Position I	**Position II**
Own Funds	100	50

Borrowed Funds	0	50
Funds Invested	100	100
Return Generated	-10%	-10%
Loss in Portfolio	-10	-10
Interest Cost	0	8
Net Profit/Loss	-10	-18
Return to Investor	-10%	-36%

The loss to the investor using margin trading will be a function of the extent of borrowed funds used. Higher the proportion of borrowed funds, greater is the loss (and profits) that the investor makes.

Stock brokers and NBFCs offer the margin trading facility to their clients who enter into an agreement with them. The agreement specifies the initial and maintenance margins to be maintained and the cost of funds. The lenders specify the stocks on which the facility is available. Typically, stocks with high liquidity and trading volumes are selected. Investors use the margin trading facility to take short-term position in stocks.

Margin calls are triggered when a fall in the value of the stocks reduces the net value of the portfolio (value of stocks less borrowed funds) and makes it necessary to bring in additional funds or securities to meet the maintenance margin specified. The lender retains the right to liquidate the position if the requirements are not met.

Margin trading amplifies the loss to the investor in the event of adverse price movements. Higher the leverage used i.e. proportion of borrowed funds to own funds; greater will be the loss to the investor. A margin call will require the investor to bring in additional funds at short notice, which may or may not be possible. In the event funds are not brought in, the investor stands to lose the securities since the agreement which they enter into with the stock broker (lender) allows the lender to liquidate the stocks partially or fully to make up the funds required.

1.2. Equity Market Indicators

1.2.1 Equity Indices

A market index is a basket of equity shares whose price is weighted by market capitalization, and tracked for changes in price level of the stocks included in it. An index enables an overall understanding of the direction of equity markets. There are several indices that have been constructed to track equity markets.

a. Narrow Bell Weathers

These are indices made up of a few large listed shares, but serve as a quick barometer of market movement. They are often used as performance benchmarks. In India, the benchmark indices are S&P Sensex tracking 30 stocks, Nifty 50 tracking 50 stocks and SX40 tracking 40 stocks.

b. Broad Indices

These indices track a large basket of stocks, the S&P BSE 500, Nifty 200 are broad indices.

- **S&P BSE 500:** S&P BSE 500 index was designed to reflect the changing pattern of the economy and that of the market. It represents nearly 93% of the total market capitalization on BSE. S&P BSE 500 covers all 20 major industries of the economy.
- **Nifty 200:** The Nifty 200 Index is designed to reflect the behaviour and performance of the top 200 companies measured by free float market capitalization. The index comprises of 200 such companies that are listed on the NSE.

c. Sectoral Indices

These are indices created to track various industry sectors such as technology, banking, metals, finance, real estate, consumer durables, media and the like. Depending on the purpose on hand, various indices can be tracked to gauge market direction.

Performance of various indices as of end November 2015 (in %)

	1 month	3 month	1 year
Nifty 50	-1.62	-0.45	-7.6
Nifty 500	-0.96	0.25	-3.35
Nifty50 USD	-3.96	-1.21	-14.3
Nifty Next 50	-0.59	-2.38	5.65
Nifty Midcap 100	0.08	1.45	6.94
Nifty IT	-2.45	-3.44	-5.82
Nifty Bank	0.44	1.66	-5.85
Nifty 100	-1.45	-0.77	-5.66
Nifty Realty	-1.56	7.41	-20.8
Nifty Infrastructure	-2.2	-6.14	-14.72
Nifty Energy	1.77	7.81	-12.92
Nifty FMCG	0.8	0.83	1.25
Nifty MNC	-1.99	-2.84	5.19
Nifty Pharma	-12.74	-13.02	2.12
Nifty PSE	0.54	-1.46	-17.29
Nifty PSU Bank	6.79	1.1	-24.32
Nifty Services Sector	-1.43	-0.08	-5.52
S&P BSE SENSEX	-1.88	0.14	-3.58
S&P BSE100	-1.32	0.21	-2.15
S&P BSE 200	-1.10	0.54	-0.55

S&P BSE Mid-Cap	0.24	1.87	7.22
S&P BSE Small-Cap	2.88	5.65	5.91

Source: NSE, BSE

The above table shows the performance of various indices of the NSE, BSE and MSEI. The performance of various segments and sectors in the market can be tracked by looking at the movements in the indices.

d. Other Market Indicators

Other market indicators that provide information on liquidity and trading activity in the stock market are:

- ***Turnover or volume traded***

Market turnover indicates how much of activity took place on a business day in the market as a whole and in each stock. The market turnover is impacted to a great extent by liquidity factors and sentiments of market participants. Upbeat market sentiments and easy liquidity conditions typically result in greater investor participation in the equity markets and have a positive impact on market turnover. Market turnover is also analyzed to determine the breadth of participation of stocks in market movements. For individual stocks, turnover figures are evaluated to determine the liquidity. Higher the turnover in a stock, better is the liquidity.

- ***Top gainers and losers***

Data on stocks that gained the most or lost the most in percentage terms indicates where a high level of price movement might have taken place.

- ***52-week high or low***

If a stock hits a new price level on the upside or on the downside, this listing indicates such extreme price points for the stock.

- ***Circuit Breakers***

If there is an abnormal price movement in an index, defined in percentage terms, the exchange can suspend trading. This is called hitting the circuit breaker. Index-based market wide circuit breakers are set daily based on the previous day's close at index movements either way of 10%, 15% and 20%. The period for which trading is suspended depends upon the extent of movement and the time when such move occurred. A 10% move before 1.00 pm halts trading for 45 minutes, between 1 pm and 2.30 pm there is a 15 minute halt and at or after 2.30 pm there is no suspension of trading. A 15% move in either direction before 1 pm leads to a one hour and 45 minute halt, between 1pm and 2pm to a 45 minute halt and after 2pm trading is suspended for the day. A 20% market movement leads to suspension of trading for the rest of the day.

- ***Price Bands***

Stock exchanges also impose price bands on individual securities to limit volatility in prices. Daily price bands are applicable on securities are as follows:

- Daily price bands on 2%, 5% or 10% either way on securities as specified by the exchange.
- No price bands are applicable on scrips on which derivatives products are available. In order to prevent members from entering orders at non-genuine prices in such securities, the exchange may fix operating range of 10% for such securities.
- Scrips included in indices on which derivatives products are available will also have appropriate price bands of up to 20%.
- Price bands of 20% either way on all remaining scrips.

The price bands for the securities in the Limited Physical Market are the same as those applicable for the securities in the Normal Market.

1.2.2 Relative Valuations Indicators

a. Price/Earnings Ratio (P/E Ratio)

The most common stock valuation measure used by analysts is the price to earnings ratio, or P/E. To compute this figure, take the stock price and divide it by the EPS figure. For example, if the stock is trading at Rs. 100 and the EPS is Rs. 5, the P/E is 20 times.

Historical or trailing P/Es are computed by taking the current price divided by the sum of the EPS for the last four quarters. Forward or leading P/Es are computed by taking the current stock price divided by the sum of the EPS estimates for the next four quarters.

For example, consider a company whose fiscal year ends in March. In order to compute the forward P/E for financial year ending 2016 (technically called FY16), an investor would add together the quarterly EPS estimates for its quarters ended June 2015, September 2015, December 2015 and March 2016. He could use the current price divided by this number to arrive at the FY16 P/E.

Theoretically, a stock's P/E tells us how much investor is willing to pay per rupee of earnings. In other words, a P/E ratio of 10 suggests that investors in the stock are willing to pay Rs. 10 for every Re. 1 of earnings that the company generates. Future growth is already accounted for in the stock price. As a result, the P/E ratio is a reflection of the market's optimism or pessimism concerning a company's growth prospects.

A company with a high P/E ratio will eventually have to live up to the high rating by substantially increasing its earnings, or the stock price will need to drop. A good example is Microsoft. During the late 1990s, when it was growing by leaps and bounds, its P/E ratio was

over 100. Today, Microsoft is one of the largest companies in the world, so its revenues and earnings can't maintain the same growth as before. As a result, its P/E has dropped to a more realistic level.

The PE ratio of a stock is evaluated relative to the market PE ratio (Nifty 50, S&P Sensex, SX40, among others), average PE ratio of the industry to which it belongs and to the PE ratios of peer group companies to determine whether it is fairly valued. The P/E ratio is a much better indicator of the value of a stock than the market price alone. For example, all things being equal, a Rs. 10 stock with a P/E of 75 is much more "expensive" than a Rs. 100 stock with a P/E of 20. It is difficult to determine whether a particular P/E is high or low without taking into account two main factors:

- **Company growth rates in the past and how they are likely to be in future:** If the earnings are not set to grow, the company risks being de-rated or valued progressively at lower and lower PEs.
- **The industry to which the company belongs:** Companies must be compared to others in the same industry, or to the industry average. For example, comparing a technology company to a utility is useless as the nature of the two industries is different.

P/E ratios change constantly and the ratio needs to be recomputed every time there is a change in the price or earnings estimates.

There are certain limitations to using the PE ratio as a valuation indicator. The projected P/E ratios are calculated based on analyst estimates of future earnings that may not always be accurate. PE ratios of companies that are not profitable, and consequently have a negative EPS, are difficult to interpret. The average P/E ratio in the market and among industries fluctuates significantly depending on economic conditions.

b. Price Earnings to Growth ratio (PEG Ratio)

This valuation measure takes three factors into account - the price, earnings and earnings growth rates. The formula used to compute the PEG ratio is as below:

$$\text{PEG Ratio} = \frac{\text{Price/Earnings (P/E) Ratio}}{\text{Earnings Per Share (EPS) Growth}}$$

(EPS is calculated as Profit after tax (PAT) / Number of outstanding common shares of the company)

This ratio may be used to express the extent to which price that an investor is willing to pay for a company, is justified by the growth in earnings. The assumption with high P/E stocks is that investors are willing to buy at a high price because they believe that the stock has significant growth potential. The PEG ratio helps investors determine the degree of reliability of that growth assumption.

The thumb rule is that if the PEG ratio is 1, it means that the market is valuing a stock in accordance with the stock's estimated EPS growth. If the PEG ratio is less than 1, it means that EPS growth is potentially able to surpass the market's current valuation and the stock's price is undervalued. On the other hand, stocks with high PEG ratios can indicate just the opposite - that the stock is currently overvalued. This is based on a belief that P/E ratios should approximate the long-term growth rate of a company's earnings. The PEG ratio may show that one company, compared to another, may not have the growth rate to justify its higher P/E, and its stock price may appear overvalued.

The efficacy of the PEG ratio as a valuation measure will depend upon the accuracy with which the earnings growth numbers are estimated. Overestimation or underestimation of future earnings will lead to erroneous conclusions about the valuation of the share.

c. Price to Book Value Ratio (P/BV Ratio)

Price to Book Value (P/BV) is a valuation ratio used by investors, which compares a stock's price per share (market value) to its book value (shareholders' equity). The P/BV ratio is an indication of how much shareholders are paying for the net assets of a company.

$$\text{Price/Book Value Ratio} = \frac{\text{Stock Price per Share}}{\text{Shareholders' Equity per Share}}$$

The book value per share is calculated by dividing the reported shareholders' equity by the number of common shares outstanding.

If a company's stock price (market value) is lower than its book value, it can indicate one of two possibilities. The first scenario is that the stock is being incorrectly undervalued by investors and represents an attractive buying opportunity at a bargain price. On the other hand, if the company is correctly valued in the opinion of the investors, then it will be regarded as a losing proposition.

The use of book value as a valuation parameter is also limited because a company's assets are recorded at historical cost less depreciation. Depending on the age of these assets and their physical location, the difference between current market value and book value can be substantial. Also, assets like intellectual property are difficult to assess in terms of value. Hence, book value may undervalue these kinds of assets, both tangible and intangible.

The P/B ratio therefore has its shortcomings but is still widely used as a valuation metric especially in valuing stocks where the book value of the assets are close to their market value such as in the case of banks where the assets are marked to market.

d. Dividend Yield

Dividend is declared as a percentage of the face value of the shares. A 40% dividend declared by company will translate into a dividend of Rs.4 per share with a face value of Rs

10 (10*40% =4). If the share was trading in the stock market for a price of Rs. 200 per share, this means a dividend yield of 2%.

The dividend declared by a company is a percentage of the face value of its shares. When the dividend received by an investor is compared to the market price of the share, it is called the dividend yield of the share.

The dividend yield of a share is inversely related to its share price. If the price of equity shares moves up, the dividend yield comes down, and vice versa. Some companies have a history of growing and consistent dividends. They are sought by investors who seek a regular income. Public sector units, especially PSU banks, in India tend to have a higher dividend yield.

Dividend yields are also used as broad levels with which to measure market cycles. A bull market will be marked by falling dividend yields, as prices move up. A bear market will have a relatively higher and increasing dividend yields as prices tend to fall.

Thumb Rules and their Limitations

Relative valuation indicators are simple and have spawned a large number of rules of thumb. For example, investors believe that stocks with price book value less than one, stocks at low price-earnings multiples or stocks with high dividend yield (which is calculated as the ratio of Dividend per Share and its Market Price), should be undervalued. While using relative value variables, caution has to be exercised in questioning the apparent undervaluation of a stock and seeking additional information before acting on such overtly simplified thumb rules.

a. High Dividend Yield

Stocks with high dividend yield appeal to investors who are income seeking and are averse to risky investments. Companies with good growth prospects may be wary of paying high dividends, but may instead like to use the profits for funding their growth. Therefore stocks with high dividend yield may not always turn out to be stocks that hold the potential for capital appreciation.

b. Low Price-Earnings Multiple

Stocks with low PE multiples are seen as being cheap, mispriced or undervalued. However, the low PEs may reflect the higher risk associated with the earnings, or lower expected growth rate in earnings, or both. A stock with low PE multiple has to be examined for the quality of its earnings before an investment decision is made.

c. Low Price-Book Value

Stocks whose market price is lower than book value are considered cheap, because accounting measures of book value may be conservative. Therefore conceptually, a stock

can sell at a discount to its book value only if its return on equity is lower than the cost of equity, or the expected earnings growth rate is too low. If there are stocks with low PBV and higher growth prospects, but lower risks, they may represent undervalued stocks, but such stocks may be tough to find.

1.3. Risk and Return from Investing in Equity

1.3.1 Price and value

Investing in equity shares of a company means investing in the future earning capability of the company. The return to an investor in equity is in two forms – dividend that may be periodically paid out and changes in the value of the investment in the secondary market over the period of time. The return to the equity investor depends on the future residual cash flows of the company or the profits remaining after every other claim has been paid. A company may use such surplus to pay dividends or may deploy them in the growth of the business by acquiring more assets and expanding its scale.

An investor therefore buys equity shares with an eye on the future benefits in terms of dividends and appreciation in value. The return to an investor depends on the price he pays to participate in these benefits and the future benefits accruing as expected. The risk to an equity investor is that the future benefits are not assured or guaranteed, but have to be estimated and revised based on dynamic changes to the business environment and profitability of the business.

Equity returns are essentially volatile and the stock markets tend to be 'noisy.' This is because a large number of players simultaneously act on new information about stocks and re-align their positions based on their expectations for the stock's future performance. Since this process is dynamic and tries to incorporate all available information about a stock's performance into the price, a stock with stable and consistent growth and profits appreciates in price; a stock whose performance is deteriorating, depreciates in price. Prices moves up when buyers are willing to acquire a stock even at higher and higher prices; prices moves down when sellers accept lower and lower prices for a stock. The stock prices thus mirror the performance of companies, and are a good barometer of how well a company, a sector, or the economy as a whole is functioning.

Stock markets are subject to bull and bear cycles. A bull market is when buyers are willing to pay higher and higher prices, as the overall optimism for better future performance of stocks is high. This happens when businesses are expanding, growing at an above average rate, face favourable and growing demand for their products and services and are able to price them profitably. The returns to equity investors go up as stock prices appreciate to reflect this optimism. As buyers pay a higher and higher price for a stock, prices may move beyond what can be justified by the underlying intrinsic value. Also businesses tend to overreach themselves, borrowing to fund expansion based on optimistic forecasts. Input

costs for raw materials and labour and interest costs for capital may increase as the bull market reaches its peak. Unrealistic increase in prices may tend to correct itself with a crash.

The bull market paves way to a bear market when stock prices fall and correct themselves. A downturn in economic cycles can lead to stress for several businesses, when they face lower demand for their products and services, higher input and labour costs, lower ability to raise capital and in many cases risks of survival. When the economic conditions change, several businesses that began profitably may come under stress and begin to fail. Bear markets in equity reflect this pessimism, stocks prices fall. Sellers quit in despair, accepting a lower price and a loss on their stocks. As prices may fall well below intrinsic values, buyers who find the valuation attractive will start coming into stocks that now are priced reasonably or lower. Lower interest rates lead to investment, and slowly the bear cycle gives way to the next bull cycle.

Stock prices reflect the underlying economic conditions for the market as a whole, the specific business conditions for sectors and companies and move in long-term cycles. Equity capital gets reallocated from failing businesses whose prices have fallen, to performing businesses whose prices appreciate. The overall effect of these cycles is that while long-term return from equity may be high, such return is subject to high short-term volatility. Investing in equity requires skills in constructing a portfolio such that the risks are well diversified across companies and sectors, and then periodically monitoring it for its composition and performance.

1.3.2 Fundamental and Technical Analysis

Fundamental analysis is based on the premise that 'fair value' of an equity share can be estimated from information about the company. Technical analysis is about looking for clues in the share price itself, for its future behaviour. Both approaches are widely used and are complementary to each other.

a. Fundamental Analysis

Fundamental analysis is about understanding the quantitative and qualitative factors that impact earnings of a company and make an estimate of future earnings based on this analysis. Analysts follow two broad approaches to fundamental analysis – top down and bottom up. If the factors to consider are economic (E), industry (I) and company (C) factors, beginning at company-specific factors and moving up to the macro factors that impact the performance of the company is called the bottom-up approach. Scanning the macro economic scenario and then identifying industries to choose from and zeroing in on companies, is the top-down approach.

EIC framework is the commonly used approach to understanding fundamental factors impacting the earnings of a company, scanning both micro and macro data and information.

- **Economic Factors**

The economic cycle has an impact on the performance of companies. A slowdown in Gross Domestic Product (GDP) growth rates can impact investment and consumption-oriented businesses. Revival in economic indicators is tracked by looking at Index of industrial Production (IIP), lead indicators such as auto sales, movement in consumer durables, capital goods imports, purchasing managers' index and consumer confidence index. As the momentum returns, concurrent and lag indicators such as changes in GDP, interest rates and wages are monitored.

Economic policy has an impact on the performance of most businesses. Direct and indirect tax rates, tax concessions and tax holidays impact business decisions on location, production and pricing. Fiscal policy impacts government and private spending patterns and market borrowing. Monetary policy impacts expectations for interest rates and inflation. External policy impacts relative competitiveness of exports and imports and the currency rates. Tracking policy stance is a critical part of economic analysis.

The important macro-economic indicators have been discussed in detail in Chapter 5. It is important at this stage to know that understanding macro-economic variables is a crucial part of equity analysis.

- **Industry Factors**

Factors which are specific to an industry impact revenue, costs, margins and growth plans of companies. Consider the following examples:

- ***Regulation:*** Banking industry in India is subject to regulation that restricts acquisition of Indian banks by foreign banks to some extent. Inorganic and organic growth of banks is subject to several approvals and regulations. The analysis of growth prospects and expansion has to consider these constraints.
- ***Entry Barriers:*** Telecom business in India can operate only if spectrum is allotted in a particular circle. There are restrictions on who can bid for spectrum and how much would be allotted. There are limitations to overall spectrum availability as well. Thus industry factor may create entry barriers for new players.
- ***Cost:*** Production of aluminium requires proximity to bauxite ore deposits and is highly energy-intensive. Aluminium producers have to bear the cost of captive power if located near the mines; or higher transport cost if located in a power-surplus location. Cement industry incurs huge transportation costs from the bulk of its produce and geographical dispersion of its markets. Regional costs per bag can vary depending on where the cement is coming from. Raw material costs similarly hit automobile manufacturers.

- ***Seasonal Factors:*** Sugarcane crushing is a seasonal activity. The industry works at high capacity in the crushing season, and holds the stocks for the rest of the season. Produce demanded during specific seasons, such as umbrellas, rain coats, woollens, coolers, festival accessories, are all subject to seasonal fluctuations in demand.
- ***Cyclicality:*** Shipping industry builds tonnage based on demand. But it takes a long time to increase tonnage. It is usual for shipping business to find that the economic cycle has turned before the additional capacity is ready. They are saddled with high tonnage during a slack, tend to sell off at losses and then struggle to meet demand when the cycle turns up.

These are some examples of industry factors. There can be various other factors such as supply and demand, price elasticity, market segments, market shares and technology.

Analyst reports that speak of industry margins, industry PE and industry growth rates, consider these factors and their impact on companies.

- **Company Factors**

Analysis of company factors encompasses the following:

- Ownership structure
- Capital Structure
- Capital expenditure
- Product segments
- Market share and growth rates
- Competitive environment
- Management strategy and quality
- Financial history and prospects
- Market price statistics
- Risk factors to revenue and earnings
- Investment rationale
- Estimates for growth, margins and earnings
- Valuation of the shares

Several commercial databases track information about companies and provide fairly detailed information to subscribers. Company analysis involves both quantitative and qualitative analysis. The objective is to present an investment or divestment recommendation on the stock.

Detailed financial analysis of a company involves understanding the following:

- Order books and growth in revenue
- Cost structure and operating margin
- Asset base and utilization
- Capacity expansion and funding plans
- Mix of debt and equity and costs
- Interest, depreciation, tax burden
- Cash generated by the business
- Pre and post-tax margin
- Earnings defined variously – earnings before interest and tax (EBIT), earnings before interest, depreciation, tax and amortisation (EBIDTA), Profit after tax (PAT), earnings per share (EPS) and so on.
- Comparison of earning estimates with revenue, capital, equity, assets, investments, market price and such variables.

Such detailed financial analysis tries to understand the factors impacting the earnings of the company and make a reasonable estimate of the future earning and growth potential. Historical estimates are used in understanding the underlying relationship, but recommendations are made based on what is expected, rather than what happened in the past.

b. Technical Analysis

Technical analysis involves studying the price and volume patterns to understand how buyers and sellers are valuing a stock and acting on such valuation.

There are three essential elements in understanding price behaviour:

- The **history of past prices** provides indications of the underlying trend and its direction.
- The **volume of trading** that accompanies price movements provides important inputs on the underlying strength of the trend.
- The **time span** over which price and volume are observed factors in the impact of long term factors that influence prices over a period of time.

Technical analysis integrates these three elements into price charts, points of support and resistance in charts and price trends. By observing price and volume patterns, technical analysts try to understand if there is adequate buying interest that may take prices up, or vice versa.

Support and resistance are tools used to identify consensus points in prices, when selling or buying seem to have got saturated. A resistance level is one where buying interest has waned, leading to peaking of prices; a support level is one where selling interest has saturated, leading to a bottoming of prices.

A series of such support and resistance points can be used to draw trend lines. Trend lines indicate overall direction of prices and any deviation away from trend is watched for a trend reversal. A moving average is a mechanical trend line drawn to see how prices behave compared to a historical average. Crossovers of moving averages provide technical clues.

Technical analysts also look for broad market indicators such as advance-decline ratio. In a bullish market number of shares advancing in price is higher than those that close lower than their earlier prices.

1.4. Comparison between various options used while investing in Equity Instruments

Successful investing in equity markets requires adequate research in identifying and valuing stocks for investment. The investment portfolio has to be diversified to manage risks, and it needs to be periodically reviewed and rebalanced to reflect the performance of sectors and companies. It is important to ensure that investment decisions are based on the qualitative and quantitative research and that the decisions are not affected by personal preferences and biases. Equity investing requires an adequate investment horizon for the investment rationale to play out and to manage short-term volatility in prices. The process of equity investing involves costs and taxes and the returns to the investor can be significantly impacted by them.

Efficient equity investment must enable all of the above. The various options available to investors for participation in equity markets are:

1.4.1 Direct Investment

The research and evaluation is done by the investor who decides on what to invest in and the timing for entry and exit. This requires access to information which may not be easily available to investors or may come at a cost. The trades are executed through brokers who are members of stock exchanges. Brokers often provide research based reports on stocks and investing climate which may be used by the investors. The stocks are bought in the name of the investor and held in their demat account. The costs of transaction and taxes are borne directly by the investor. Creating an effectively diversified portfolio that will meet the return and risk requirements of the investor will take time, given the limited resources that retail investors will have. Managing a portfolio may require time and skills beyond most investors.

1.4.2 Investment through Portfolio Management Services (PMS)

Investors can choose to invest through a Portfolio Management Service (PMS) offered by banks, broking houses, mutual funds and others. The service can either be a discretionary PMS, where the portfolio manager manages the portfolio in alignment with the investor's requirement or a non-discretionary PMS where the portfolio manager will provide advice and information to the investor who will themselves take the decisions on investment choices and timing of the investment. The portfolio manager will execute the decisions taken by the investor. A discretionary PMS provides the benefits of professional management of the portfolio with the decisions being taken by the portfolio manager. This service comes at a cost. The portfolios can be structured to meet specific preferences of the investors such as asset classes to invest in, holding concentrated portfolios to enhance returns, and stocks or sectors to avoid. Transactions in the investor account lead to transaction costs and taxes. Investors have easy access to information on their portfolio, even daily. A non-discretionary PMS puts the onus of decision making on the investor, with the portfolio manager providing support and execution facilities.

1.4.3 Investment through equity mutual funds

Mutual funds are portfolios that are created and managed according to stated investment objectives. The investment objective will define the asset classes in which the fund will invest, such as equity, debt, gold or a combination of assets, and the strategy adopted to create and manage the portfolio. Equity funds invest in equity instruments to meet the objective of growth. The construction of the portfolio is as per the regulations that ensure a minimum level of diversification and risk mitigation. It is managed by professional fund managers who make and monitor the investment decisions. There are wide variety of schemes focusing on different market segments such as large, mid or small cap, sectors, strategies and investment styles for investors to choose from. Costs are borne by the scheme and are limited by regulation. Investors indirectly bear the costs. Tax implications arising from portfolio decisions are attributed to the scheme and may have beneficial treatment. Taxes arising from the investor's transaction decisions are borne by them. Performances of mutual fund schemes are benchmarked to market indices that reflect the objectives of the portfolio. Investors can easily evaluate how the fund has performed over different time horizons. Investors do not directly hold the securities, though they are the beneficiaries of these investments. Investor preferences on stocks, sectors or their market views are not considered in the construction and management of the portfolio. However, the ease of entry and exit from schemes means that investors can implement a market view or preference using appropriate schemes. As participants in an investment pool, investors may be affected by the decision of other investors to withdraw from the scheme or to invest additional sums.

1.5. Debt Markets

1.5.1 Short Term Debt Markets

Short-term debt markets enable lending and borrowing funds up to a tenor of one year. Instruments in the short-term market can be classified under two heads:

- **Money Market Instruments**

These are issued with a tenor of less than 365 days.

- Treasury bills issued for 91-day, 182-day and 364-day tenor.
- Certificates of deposits usually issued for a 90-day tenor.
- Commercial paper usually issued for a 90-day tenor.
- Collateralised borrowing and lending obligations (CBLO) with 1 to 14-day tenor.

- **Short- Term Instruments**

These instruments have a residual tenor less than 365 days.

- Government securities and corporate bonds with less than one year to maturity.
- Floating rate bonds with less than one year to next interest reset.
- Securitised paper with less than one year average maturity.

a. Collateralised Borrowing and Lending Obligation

Collateralised Borrowing and Lending Obligation (CBLO) is a short-term instrument used to lend or borrow for periods ranging from overnight to one year against the collateral of eligible debt securities (mostly G-Secs and T-bills).

A CBLO is like a standardized repo transaction in which coupon rates depend only on the demand and supply of funds among market participants. Participants are assigned borrowing limits on the basis of securities deposited with the Clearing Corporation of India (CCIL). CCIL acts as counterparty to both sides on a CBLO deal and its system matches borrowing and lending orders.

CBLOs were introduced in order to accommodate participants without access to the call money market. Mutual funds are among the biggest lenders in the CBLO segment. Overnight call markets are available only to banks and primary dealers. Mutual funds prefer CBLOs where lending is fully secured against collateral of government securities. The fund, if required, liquidates its position before maturity in the highly liquid CBLO market. Rates in CBLO markets are closely aligned to repo rates; and slightly lower than call rates.

b. Treasury Bills

Treasury bills are short-term instruments issued by the RBI on behalf of the government. They are currently issued for maturities of 91-days, 182-days and 364-days.The government issues T-bills for two broad purposes:

- To meet short-term requirements for funds.
- As part of the Market Stabilisation Scheme (MSS).

T-bills are issued by the RBI every week through an auction. They are issued at a discount and redeemed at par value. The difference between the issue and redemption price, compared to the issue price and annualized, given the days to maturity of the T-bill, is the implicit yield.

The yields on treasury bills are determined through the auction process. Subsequently the bills are traded in the secondary markets. The dominant buyers of T-bills are state governments and banks.

c. Certificates of Deposits (CDs)

CDs are predominantly issued by banks, to meet short-term requirements of funds. They can be issued for maturities up to 364 days. Rates on CDs are similar to bank deposit rates of the same tenor, except that they are not transactions between the bank and the depositor, but a security issued by the bank and bought by the customer.

Owing to restrictions on mutual funds holdings of bank deposits, liquid funds tend to hold CDs rather than bank deposits. According to SEBI Regulations, a mutual fund's holding in short-term deposits of banks cannot exceed 15% of its net assets. This can be raised to 20% with the approval of the trustees. The regulation also restrict the holding of the mutual fund in deposits of any one bank to 10% of its net assets and prohibits any holding in the deposits of a bank that has invested in the scheme.

When liquidity is tight, banks issue CDs at higher rates to attract deposits. CD mobilization and rates tend to decline with improvement in liquidity.

d. Commercial Paper

Commercial Papers (CPs) are issued to meet the short term funding needs of companies, primary dealers and financial institutions. They can be issued for maturities between a minimum of 7 days and a maximum of one year from the date of issue, but the 90-day CP is most commonly issued. Issuers must obtain a credit rating for the issue of CP and the rating must not be below an 'A3' rating, according to the rating symbols prescribed by SEBI for money market instruments.

The yield on a CP depends on the credit rating of the paper. Higher the rating, lower the offered rate. Yields on CPs are at a spread to the T-bill rate. NBFCs are large issuers of CPs.

CPs are discounted instruments which are issued at a discount and redeemed at par. They may be held in physical or dematerialized form. However, RBI regulated entities are required to compulsorily hold the instrument in dematerialised form. Stamp duties apply on issuance.

e. Bonds with Residual Maturity less than a year

When longer-term bonds are close to their maturity dates, they no longer exhibit fluctuations in price. The duration of such bonds is low and so is the price sensitivity to changes in discount rates. These bonds then behave like money market securities. The concept of duration has been discussed in detail in Section 1.6.

But they could have been issued at a coupon rate that is higher than the money market rate, in which case they represent a good source of yield to short-term funds.

Floating rate bonds are usually issued for tenors longer than one year. However, their rates are reset more frequently, depending on the benchmark. Between two reset dates, a floater is effectively a fixed interest rate bond and its price is sensitive to changes in money market rates. Longer the period between reset dates, higher is the price sensitivity. If the benchmark is the overnight rate (MIBOR) coupon rates are reset daily and the floater is relatively less price sensitive. Floaters represent a good source of income for short-term funds, especially if interest rates are expected to rise.

f. Securitised Instruments

There are several lenders in the market who receive periodic cash flows from their borrowers. These primary lenders are usually finance companies and banks who receive repayments of car loans, home loans, truck loans and other loans in the form of equated monthly instalments (EMIs). These instalments include both principal and interest.

To the primary lender, however, these monthly cash flows are a trickle compared to their need for lump sum funds to undertake further lending transactions. They therefore agree to securitize these receivables.

A special purpose vehicle (usually a trust) is created, which takes over the loans, and issues securities against them. EMI payments of borrowers are passed through to the buyers of these securities. They are called PTCs (pass through certificates) because they pass the EMIs through to the buyer.

The buyers receive periodic payments against the lump sum investments that they make. PTCs are compulsorily credit rated. The institutional buyers who invest in PTCs tend to hold them until maturity. However, in March 2011, SEBI permitted listing of

securitized paper with the objective of increasing retail participation and facilitating secondary market activity.

1.5.2 Long Term Debt Instruments

Long-term debt instruments can be broadly divided into government bonds and corporate bonds.

Government bonds are also called gilts (due to the historical practice of printing government securities with a gilt-edge) or treasury bonds. In India, the term G-Secs is most used to represent government securities.

Corporate bonds are issued by both Public Sector Units (PSUs) and non-PSU companies. Other issuers of long-term bonds are state governments, municipal corporations and local bodies.

a. Government Securities

Government securities are issued by the RBI on behalf of the government. RBI is the nodal regulatory authority for primary and secondary markets in government securities.

The government resorts to market borrowings as a means to bridge the fiscal deficit. An estimate of the market borrowing of the government is announced along with the deficit numbers. The market borrowing programme has grown significantly over the years. Gross borrowing refers to the total borrowings of the government. Net borrowings refer to the amount borrowed after deducting the interest and redemption payments.

Government borrowings can be for the short term (maturity less than 1 year) or for the long term (maturity greater than 1 year). Short-term borrowings are through the issue of Treasury Bills with maturities of 91 days, 182 days or 364 days. Cash Management Bills for maturities less than 91 days may be issued occasionally to tide over very short-term fund shortages. Dated Government Securities, commonly known as G-Secs, refer to securities with maturities from 1 to 30 years.

T-bills and cash management bills are zero coupon securities, issued at a discount and redeemed at par. Other G-Secs are usually issued as interest paying coupon bonds, with a fixed rate of interest paid semi-annually. Some G-Secs are issued as zero coupon bonds with no interest payments. Since 2002, there have been issues with floating rate bonds as well, though such bonds are not many, as they are not very liquid.

b. Inflation Indexed Bonds

Inflation Indexed Bonds (IIB) are a category of government securities issued by the RBI which provides inflation protected returns to the investors. These bonds have a fixed real coupon rate which is applied to the inflation adjusted principal on each interest payment date. On maturity, the higher of the face value and inflation adjusted principal is paid out to

the investor. Thus, the coupon income as well as the principal is adjusted for inflation. The inflation adjustment to the principal is done by multiplying it with the index ratio. The index ratio is calculated by dividing the reference index on the settlement date by the reference index on the date of issue of the security. The Wholesale Price Index (WPI) is the inflation measure that is considered for the calculation of the index ratio for these bonds.

The IIBs are issued through an auction, like other G-secs. Currently, bonds with a tenor of 10 years are being issued. The coupon is paid on a half-yearly basis. These bonds do not offer any tax benefits to the investors and are interest income and maturity value are taxed like other fixed income instruments.

c. Inflation Indexed National Savings Securities

Inflation Indexed National Savings Securities (IINSS) are inflation indexed bonds with a tenor of 10 years that are indexed to the Consumer Price Index (CPI). They are available for investment by retail investors including individuals, Hindu Undivided Family and charitable institutions, among others. The interest rate on these securities will have two parts: a fixed rate of 1.5% per annum and the inflation rate. The inflation rate will be based on the Consumer Price Index (CPI). The fixed rate portion will be the floor, in other words the guaranteed rate even in the event of deflation. Interest will be accrued and compounded on half-yearly basis and paid along with the principle at the time of redemption. Investors can buy the bonds from authorized banks or the Stock Holding Corporation of India. The bonds will be issued in the form of entry in the Bond Ledger Account and a certificate of holding will be issued to the investor. The minimum investment is Rs.5000 and the maximum Rs.10 lakh per annum. Transferability is allowed only to the nominees in the event of the death of the investor. Pre-mature redemption is allowed and the bonds can be used as collateral for loans.

d. Issuance of Government Securities

Banks, insurance companies, mutual funds, and members of the Negotiated Dealing System (NDS) are eligible to participate in an auction for G-Secs. These bidders are called as competitive bidders. 5% of the issuance amount is also reserved for non-competitive bidders such as trusts and individual investors. These bidders do not bid for a price, but for an amount of G-Secs they like to buy.

Since April 2006, RBI does not participate in G-sec auctions or buy G-Secs in the primary markets. Therefore devolvement of a G-sec issue on RBI is no longer possible. Primary dealers are required to completely underwrite a G-sec issue and stand in to buy securities not bid by other players in an auction. Each PD is also required to competitively bid for at least 3% of the auction amount.

- **Secondary market for G-Secs**

G-Secs represent the most liquid segment of the long term debt market and account for most trading activity. Primary dealers, banks, insurance companies and mutual funds are the primary participants in these markets. The Employees Provident Fund Organisation (EPFO) is also a major buyer of G-Secs both in primary and secondary markets.

G-Secs can be traded in the secondary market in multiple ways. Market participants can buy and sell G-Secs in the Over-the-Counter (OTC) market, the Negotiated Dealing System (NDS) of the RBI or in the wholesale and retail debt market segments of the Bombay Stock Exchange and the National Stock Exchange.

OTC deals are usually conducted over the telephone. Counterparties negotiate the amount and rate of traded securities until a suitable deal is reached. Such trades are required to be reported on the secondary market module of the NDS.

After the introduction of Negotiated Dealing System-Order Matching (NDS-OM) in August 2005, most of the trading and settlement in G-Secs is now carried out in this system. In addition, G-Secs can be traded on Bombay Stock Exchange and National Stock Exchange (NSE). The Wholesale Debt Market (WDM) segment of NSE only serves as a reporting platform where members enter trades after they are completed.

A separate retail market segment was set up with a lower trading lot of Rs. 10,000. However, there is hardly any trading in G-Secs by retail investors.

- **Liquidity of G-Secs**

G-Secs are deemed to be listed immediately on issuance. Details of these securities can be obtained from www.nseindia.com, www.ccilindia.com and www.bseindia.com.

G-Secs are the most liquid instrument in the long-term debt market. However, G-sec trades are concentrated in a few securities. Top 10 securities usually account for around 85% of the traded volumes.[1]

Trading volumes in G-Secs are a small percentage of outstanding value of issued bonds. Active players like banks tend to hold some G-Secs under 'Held-to-maturity' category, where mark-to-market is not required frequently. This reduces the amount of floating stock in the market.

Many other bond investors are buy-and-hold investors. For example, provident funds and insurance companies, which hold about 20% of G-sec issuance, tend to hold to maturity. This is largely due to investment norms that require high levels of G-sec holdings by institutions. The sovereign yield curve provides information about yields across G-Secs of different maturities at a point in time. The yield associated with certain benchmark maturities are closely tracked and followed. Benchmark securities are highly traded. Thus,

[1] Source: CCIL Rakshitra Dec 2015.

prices of these securities are very responsive to policy changes or market factors. The 10-year yield is one such benchmark.

Movement in the 10-year yield is used to track movements in G-Secs markets over time. Other benchmark yields that are used are 1-year, 5-year, 15-year and 30-year yields.

Bonds that tend towards benchmark tenors enjoy an increase in trading interest, while bonds that have moved past the benchmark tenors tend to become less liquid over time.

Liquidity in G-Secs is thus limited, with the bulk of trading concentrated in benchmark securities and those approaching benchmark tenor.

e. Corporate Bonds

The market for long-term corporate debt is made up of two segments:

- Bonds issued by public sector units, including public financial institutions.
- Bonds issued by the private corporate sector.

PSU bonds can be further classified into taxable and tax-free bonds. Tax free bonds are mainly issued by PSUs in the infrastructure sector. Corporate bonds with embedded options, floating-rate interest, conversion options and a variety of structured obligations are issued in the markets.

Specified bonds that are issued by National Highway Authority of Indian (NHAI), National Bank for Agriculture and Rural Development (NABARD) and National Housing Bank (NHB), qualify as instruments that enable saving in capital gains taxes. Investment in such capital gains bonds allows investors to save tax on long term capital gains under Section 54 EC of the Indian Income Tax Act.

About 75% of corporate bond issuance is by the financial sector. The infrastructure and the manufacturing sector accounts for the remaining 30%. About 80% of all bond issuance is by the public sector financial institutions and other PSU entities.

Secondary markets for corporate bonds are quite illiquid as compared to government securities. Most deals are done telephonically or over-the-counter between institutional players such as mutual funds and banks. All secondary market trades are required to be reported on one of the three reporting platforms run by NSE, BSE and FIMMDA. Bonds of finance companies and institutional bonds dominate the list.

- **Credit Spreads**

Corporate bonds are issued at a spread to the G-sec yield. The difference between the two yields is called credit spread. Credit spread depends on the credit rating and the expected

default probability associated with the issuing company, its industry of operation as well the overall credit and liquidity situation in the economy.

Spreads of bonds with better credit rating are lower than those of bonds with lower credit rating as the latter are expected to be more likely to default on debt obligations. Spreads can change based on market expectation for credit availability and default probability. Spreads increase when the downgrades by credit rating companies are higher than that of upgrades. Investors expect credit quality to drop and demand higher credit spread on bonds. Credit spreads also increase in response to a credit squeeze as happened in October 2008.

1.6. Debt Market Analytics and Indicators

1.6.1 Structure of a Fixed Income Instrument

A bond usually has the following features:

- Par value or face value
- Interest rate or coupon
- Maturity date
- Redemption value
- Tenor or term to maturity

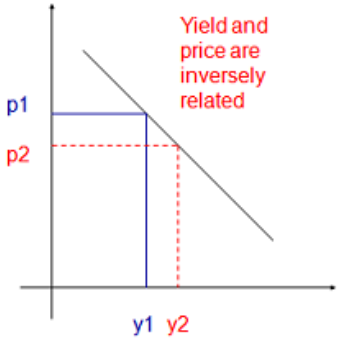
Consider a HDFC 9.70% 2017 bond issued on 19 July 2007 and maturing on 19 July 2017 with annual payment of interest.

- The par value of the bond is Rs.100.
- The coupon is 9.70% payable annually, which means Rs.9.70 is payable for every bond on July 19th, every year.
- The maturity date is 19th July 2017, when par value of Rs.100 is returned.
- The tenor or term to maturity of the bond on its issue date is ten years. If we measured term to maturity on 19th July 2014, it would be three years.

A pre-specified cash flow structure makes a bond easier to value as compared to an equity instrument.

- ***Valuing Cash Flows***

A set of cash flows can be evaluated at any point on the time line, by using the principles of time value of money.



If a set of cash flows accrues in the future, their value at any point in the present is the sum of the discounted values of the future cash flows. The rate, at which the cash flows of a bond are discounted, is called the yield.

If we discount the cash flows by a higher yield, the value of the bond will reduce. If we discount by a lower yield, the value will move up. The value of the bond and its discounting rate (yield) are inversely related.

- ***Changes to Bond Value***

Two factors impact the value of a bond:

- The time to maturity (also called the tenor or tenure of the bond)
- The discounting rate.

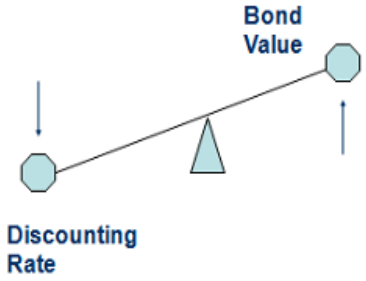
The time to maturity of a bond changes virtually every day, as the bond moves towards its maturity date. When we value a bond, we measure the distance of each cash flow to the valuation date. This also means that the value of a bond will change with change in tenor, even if everything else is constant.

The discounting rate is the yield determined by the market forces. A bond cannot be valued at any arbitrary rate, but only at a rate that reflects the market rate for its tenor and its credit quality. The discounting rate is therefore not a static rate but will change to reflect any change in the tenor and credit quality of the bond.

The valuation of a bond for its residual tenor, using a market rate or yield to discount the cash flows, is also called as 'marking-to-market'.

- ***Rate and Price***

In the bond markets, what traders care about is whether the price reflects their expectations for the yield. Bonds are valued given such expectations and bought or sold on that basis.



For example, if interest rates are expected to move up traders will sell off bonds since increase in interest rates will lead to a fall in their value. Therefore prices fall in anticipation of increase in interest rates.

Similarly there is a rally in the bond markets if interest rates are expected to fall. A lower interest rate will mean a higher value for bonds and buying interest goes up before such an anticipated rise.

Therefore bond prices reflect the expectations for future interest rates just as stock prices reflect expectations for future earnings.

- ***Yield To Maturity***

The rate that equates the present value of the future cash flows of a bond to its current value is called the Yield to Maturity (YTM) of a bond.

The YTM of a bond is the discount rate that is implied in the value of the bond at a given point in time.

To find the implied rate several iterations may be required with different rates till the right one that equates the sum of the present values to the price of the bond is arrived at. Alternatively, the XIRR function in MS Excel can be used to find the YTM in a given set of cash flows along with their dates. The calculations are shown below for the HDFC 9.70% 2017 bond issued on 19 July 2007 and maturing on 19 July 2017 with annual payment of interest, assuming the bond is trading at Rs. 103 on Nov 1, 2014:

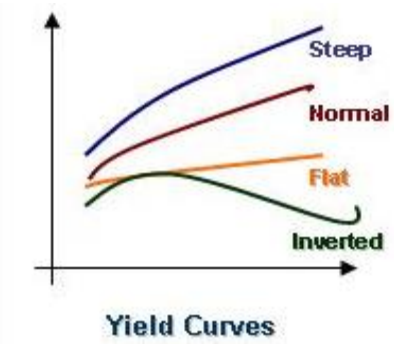
B6 =XIRR(B2:B5,A2:A5)

	A	B
1	**Date**	**Cashflows**
2	01-Nov-14	-103
3	19-Jul-15	9.7
4	19-Jul-16	9.7
5	19-Jul-17	109.7
6	**YTM**	**9.6%**

- ***Yield and Yield Curve***

In the bond market, what is quoted and observed is the price of a bond. Since the cash flow of the bond is known, this price can be used to find the yield of the bond. The yields of all bonds traded in the market can thus be computed from their market prices. The curve that links the yields of traded bonds at a point of time is the yield curve.

The interest rate in the market for a given tenor can be read off the yield curve. What an index is to an equity market, a yield curve is to the debt market. Benchmark yields for 5-year, 10-year and 15-year bonds are more closely tracked than the others.



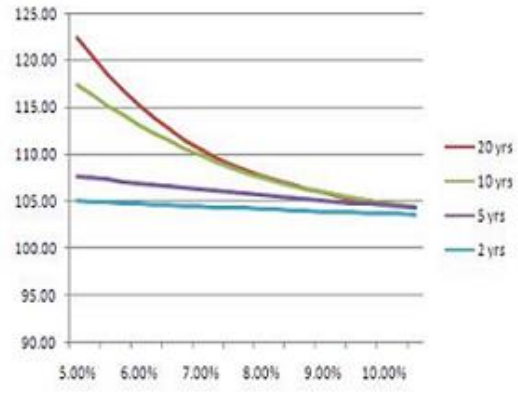
Yield Curves

There are three significant points about the shape of the yield curve. First, in terms of pure liquidity premium, the yield curve slopes upwards since investors like to lend for the long term only if the rates are higher than that of the short term. An upward sloping curve means there is a liquidity premium in the market.

Second, the yield curve and changes in its shape provide clues to the expectations of the market for interest rates. If traders expect rates to increase, the yield curve will slope upwards. If they expect rates to fall, the yield curve will flatten and in an extreme case, can inverse.

Third, different sets of investors operate at different tenors, and their behaviour will impact the slope of the yield curve. For example, banks operate at the short end and insurance companies in the long. Their positions can influence the shape of the curve.

- ***Bond Price Sensitivity***



Changes in the rate of discounting (yield) create changes in bond prices. The inverse relationship between price and yield of bonds implies that every change in yield would bring about a change in price in the opposite direction.

Interest rates are determined by market forces, and can therefore change continually. The picture alongside shows the relationship between yield and price for a set of bonds. It is evident that price and yield are inversely related.

It can also be seen that the change in price for a change in yield is not uniform across the chosen bonds. The response of each bond is unique.

- **Factors Impacting Sensitivity**

Price sensitivity is evidently unequal across bonds. This is directly related to the valuation principles just discussed. The value of a bond is the sum of the present value of future cash flows.

A change in the discounting rate (or yield) cannot impact all bonds uniformly, because the future cash flows are different, defined by the coupon and repayment structure of the bond. The number of future cash flows varies, depending on the tenor of the bond, frequency of interest payment and repayment structure of a bond.

Therefore, if the discounting rate is changed, the impact on value depends not just on the rate itself, but also on the coupon, repayment structure and the tenor of the bond. Even if two bonds were trading for the same price in the market, they differ in structure and therefore will differ in their response to interest rate changes.

- ***Duration***

Duration is a summary measure of the interest rate sensitivity of a bond, bringing together the coupon, tenor and YTM, in a single number. It can also be looked upon as an alternate measure of maturity that considers the cash flows and the yield in its computation.

In a coupon paying bond, the tenor represents the distance to the last cash flow only. Some cash flows accrue prior to the maturity date of the bond, in the form of coupons. The average tenor of the bond would then be shorter than the term to maturity. One can use the cash flow as the weighting to measure average tenor of the bond.

Investor need to use the present value of the cash flows, without which the cash flows are not comparable. Therefore, if we use the present values of the cash flows as weight, and find the weighted average maturity of a bond, we measure the duration of a bond.

Duration thus measures the price sensitivity of a bond. It is possible to generalize that higher the duration of a bond, higher its price sensitivity.

The duration of a coupon paying bond will always be lower than its term to maturity, because the presence of cash flows before maturity will drive the average maturity of the bond lower than its tenor.

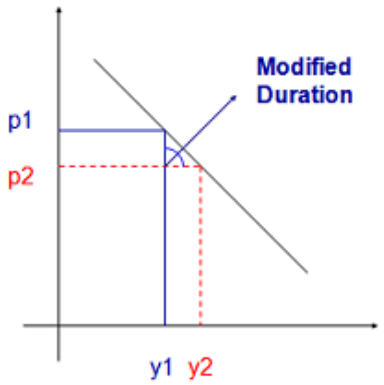
By the same token the duration of a zero coupon bond is equal to its term to maturity, as there is only one cash flow which accrues on maturity date.

Just as yield of a bond alters with change in tenor, duration is also a shifting measure that alters as the tenor changes. The duration of the residual cash flows of a bond can be measured by discounting the cash flows, and finding the weighted average tenor.

- ***Modified Duration***

The duration of a bond also enables estimating the price sensitivity of a bond. The duration can be used to generalize the impact of yield change on the price change for a bond.

Consider the picture alongside which shows the inverse relationship between price and yield. When yield moves from y1 to y2, price drops from p1 to p2. The extent of this fall (also the slope of the diagonal line) is the modified duration.



The change in price for a given change in yield, is the modified duration of a bond, which is

= Duration / (1+y/k)

Where y is the yield of the bond and k is the number of coupon periods in a year. Using modified duration we can estimate the price sensitivity of a bond.

The change in price of a bond, for a change in yield, is a function of the bond's modified duration. (Note that absolute changes in price can be different and therefore we talk of percentage change)

For example, if the yield of a bond were to change by 20 basis points, the percentage change in price of a bond, whose modified duration is 4, will be

= 4 X 0.0020 *100

= 0.8%

(Note that 0.20 is 20% and 20 bps is 0.20%)

Since yield and price are inversely related, the price of the bond will move 0.8% in the opposite direction to which the yield moved.

1.7. Risk and Return from Investing in Debt

1.7.1 Benefits of investing in debt securities

a. Fixed Income: The issuer of debt commits to pay a pre-decided coupon rate to the investor at the time of issuance. The periodic interest payments are promised under the debt contract, and the investor has a legal right to receive them. This feature of debt makes it less risky than variable return securities (such as equity). For some categories of investors, such as retired persons, the fixed income from debt is ideal as it provides safe and certain returns on investment.

b. ***Fixed Tenor:*** Debt is held for the tenor of the instrument. Once principal has been repaid to the investor, the security is extinguished. As a result, capital is tied up only for a limited period of time.

1.7.2 Risks of Investing in Debt Securities

a. ***Inflation/purchasing power risk:*** Inflation or purchasing power risk is the risk that though returns may be fixed and predictable in absolute terms, they may be lower and risky after adjusting for inflation. For e.g., a bond that promises 8% coupon over a 5 year tenor is a good investment only if inflation is below 8% over that period. If inflation is higher than 8%, then real returns from the bond will turn negative. Investment in debt

securities is especially vulnerable to high inflation because unlike equity, coupons are fixed and cannot be increased to match inflation.

b. ***Default/credit risk:*** Default or credit risk refers to the risk that debt issuers may default on interest and/or principal payments. Government securities are free of default risk, but all other debt is exposed to it. Well known and reputed companies and institutions tend to offer lower interest rates on debt as compared to riskier issuers. Usually, the credit rating of an instrument is a good indicator of credit risk. The higher coupons offered by lower-rated debt may tempt investors but it must be remembered that these bonds are more risky. Loss on default is lower for secured debt, because the investor has recourse to the assets of the issuing company in case of actual default. That is why unsecured debt such as corporate fixed deposits pay higher rates than secured bonds.

c. ***Reinvestment risk:*** Debt securities often allow investors to choose between (i) periodic interest payments and (ii) cumulating and re-investing interest. If investors opt to pull out interest, they face reinvestment risk unless they can reinvest the coupons at the same or higher rate. If they opt for the cumulative option, they implicitly reinvest at the same rate as the debt security. Investors tend to prefer regular interest payouts instead of re-investment of interest, even though they may not need the cash for consumption. But this tendency exposes their investment to re-investment risk.

d. ***Call risk:*** Call risk exists in callable debt securities. The investor may have planned to stay invested until bond maturity, but the issuer may exercise the option to call the security earlier. Usually securities are called back when interest rates decline because issuers want to retire high-cost debt and re-issue fresh debt at lower rates. As a result, investors are forced to reinvest at lower rates.

e. ***Liquidity risk:*** The limited liquidity in the secondary markets and the dominance of institutional players makes it difficult for most buyers of bonds, particularly smaller investors, to sell what they have bought. Most investors end up holding a bond to maturity. The limitations of this approach are:

- If market rates move down, price of the bond will rise. Investors may not be able to sell and profit from the price rise.
- If rates move up, investors cannot easily switch into higher coupon bonds to increase their interest income.
- Any drop in credit quality during the tenor of the bond increases their credit risk.

1.8. Investing in Debt Products

Debt investments allow investors to earn a pre-defined return over a fixed tenor. Deposits, savings schemes, bonds and debt mutual fund schemes are all products that are categorized as debt investments.

1.8.1 Deposits and Saving Schemes:

- Savings schemes such as the Post Office Savings schemes, National Savings Certificate (NSC), Public Provident Fund (PPF), deposits with banks, Non-Banking Financial Companies (NBFCs) and others are designed only to provide defined income over the term of the scheme. They do not provide any appreciation in value.
- Deposits and savings schemes are for a fixed tenor and exiting the investment mid-term in case of an urgent requirement for funds typically comes with penalties in the form of lower returns.
- The credit risk associated with a deposit or saving scheme has to be borne by the investor and cannot be transferred. While credit risk does not exist in government guaranteed products, it is a significant risk in other products such as deposits with NBFCs and companies.

1.8.2 Debt Securities

- Debt securities such as bonds and debentures may be listed and traded on stock exchanges. This enables investors to earn periodic coupon as well as gains from appreciation in the price when interest rate movements are favourable. This also means that adverse interest rate movements will lead to loss in value, which will eat into the periodic coupon income earned on the security.
- The low liquidity in Indian bond markets does not facilitate easy sale of a bond to realize the gains from price movements or even if there is a need for funds. Investors end up holding bonds to maturity.
- Credit risk in a bond or a debenture can be transferred by selling the security at a price that reflects the revised credit quality of the security.
- The fixed tenor of debt schemes and securities also impose a need for investors to evaluate available investment opportunities to re-invest the proceeds received as the schemes and securities mature.
- The interest income earned on debt products are taxed in the hands of the investor at the marginal rate applicable for the investor. This affects the post-tax returns earned by the investor. Some schemes such as the PPF and bonds designated as tax-free are exempt from taxation on interest earned.

1.8.3 Debt Mutual Fund Schemes

- Debt schemes of mutual funds create portfolios out of debt securities to meet defined objectives such as liquidity and market returns from investing in short term securities, periodic income from a portfolio of bonds or total returns from the price movements in debt securities.

- These schemes provide a way for investors to benefit from investment in securities that may otherwise not be available for investment by retail investors or may have very large minimum investment limits.
- Fund managers use strategies to manage the interest rate risk and credit risk in the portfolio in line with the expected risk and return from the scheme.
- Open-ended debt schemes have no maturity even though the scheme invests in securities with fixed tenors. The fund manager manages cash flows to earn market returns and provide liquidity to investors even though the underlying securities are illiquid.
- There are no fixed or guaranteed returns from debt funds. The return that the fund will generate is a function of the current market interest rates and the securities held in the portfolio.
- Mutual fund schemes generate returns from interest income from the securities held as well as from gains from increase in the value of the securities and pass them as dividend to the investors. Dividends earned are exempt from tax in the hands of the investor though the scheme pays a dividend distribution tax. Debt schemes enable investors to structure their returns from the scheme in a way that meets their requirement for income or capital appreciation in a tax-efficient way.

1.9. Derivative Markets

Derivative trading was introduced in India in June 2000 and turnover has increased dramatically since then. India's equity derivative markets are thus among the largest in the world.

1.9.1 Futures

A futures contract refers to the purchase of an underlying for delivery on a future date.

For example, if one buys a share of Reliance Industries paying today's price and agrees to deliver shares for settlement, such a transaction is a spot transaction. However, if one buys Reliance on December 9, for delivery on December 28, one is a buyer of the share on the future date. The buyer may agree to a price at which he would buy on the future date, and that is the futures price of Reliance Industries Ltd.

A futures contract enables a buyer or a seller to buy or sell a stock, commodity or interest rate, for delivery on a future date.

It is possible using a futures contract to implement a view about an underlying asset, for a future date. For example, a producer of food grains might like to sell his produce before the

grains are due to be harvested. He is then able to sell his future produce at a price he is able to negotiate today.

a. Equity Futures Contracts

NSE provides trading in futures contracts for 6 major indices, as well as around 166 individual equity stocks.[2] The BSE offers future contracts on 5 indices and 41 stocks and the MSEI in one index and around 126 stocks. The NSE and BSE also offer futures contracts on foreign indices. There are futures on the following underlying:

- Nifty 50
- Nifty IT Index
- Nifty Bank
- Nifty PSE
- Nifty Infrastructure
- India VIX
- Nifty Midcap 50
- FTSE100
- S&P 500
- Dow Jones Industrial Average Index
- S&P BSE SENSEX
- S&P BSE BANKEX
- S&P BSE OIL & GAS INDEX
- S&P BSE TECK INDEX
- S&P BSE100
- Hang Seng Index
- MICEX Index
- FTSE/JSE Top 40
- IBOVESPA Futures
- Individual Securities
- SX 40

[2] As of January 2, 2016.

The minimum eligibility norms for stocks to be included in the F&O segment are announced by SEBI from time to time. These norms relate to the liquidity and market capitalisation of the stock, among others.

Futures are exchange traded instruments. Therefore the features of the contract are specified by the exchange.

Consider for example, the Nifty 50 contracts specified by the NSE as follows:

Underlying:	Nifty 50
Symbol:	Nifty 50
Trading cycle:	3-month trading cycle - the near month (one), the next month (two) and the far month (three)
Expiry Day:	Last Thursday of the expiry month. If the last Thursday is a trading holiday, then the expiry day is the previous trading day.
Trading Lot:	75
Settlement Basis:	Cash settlement

The contract specifications for index futures on the BSE are as follows:

Underlying:	S&P BSE SENSEX
Symbol:	BSX
Trading cycle:	3-month trading cycle - the near month (one), the next month (two) and the far month (three)
Expiry Day:	Last Thursday of the expiry month. If the last Thursday is a trading holiday, then the expiry day is the previous trading day.
Trading Lot:	20
Settlement Basis:	Cash settlement

The MCX-SX specifies the following details for its index futures.

Underlying:	SX 40
Symbol:	SX 40

Trading cycle:	3-month trading cycle - the near month (one), the next month (two) and the far month (three)
Expiry Day:	Last Thursday of the expiry month. If the last Thursday is a trading holiday, then the expiry day is the previous trading day.
Permitted Lot Size: 35	
Settlement Basis: Cash settlement	

- **Trading and Settlement**

Futures contracts trade online on the electronic trading screens of the exchange and orders are matched automatically. Apart from the trading lot, exchanges also specify price steps, base prices and price bands for futures contracts.

A price step indicates the rounding off digits for the price of a futures contract. All contracts in India have a price step of 5 paisa.

The base price is the price at which a futures contract will be introduced in the market. The exchange specifies the base price on the first day of the contract. The daily settlement prices thereafter are determined based on the trades on the exchange.

In order to avoid erroneous price entry by trading members, exchanges specify an operating range within which the prices will have to fall. As on October 2014, NSE and the MSEI specify the operating range of 10% of the base price. A price that exceeds the range will come up for price freeze by the exchange authorities.

The exchanges may also specify a maximum quantity limit based on the price of the underlying. Orders that exceed this limit are frozen and the exchange may allow the order to go through if the member confirms that there is no error.

Futures contracts are settled through the clearing corporation of the exchange. Clearing corporations impose minimum and mark-to-market margins on open positions of members, to manage risk.

The daily settlement price for all outstanding futures contracts is computed on every trading day, for purposes of computing margins on open positions. The daily settlement price is the weighted average price of all trades in the futures contract in the last 30 minutes of trading. The open positions are marked to market using the settlement price.

On the settlement day, the final settlement price at which all outstanding positions in a futures contract will be squared off is calculated as the weighted average price of trades in the last 30 minutes of trading in the relevant underlying stock or index in the cash market.

- **Pricing a Futures Contract**

The pricing of a futures contract is based on the simple principle of carry cost. Suppose a stock is selling for Rs.100 in the spot equity markets today. We can buy this stock in the spot market and the price to be paid is the spot price (S).

There is another market, namely the equity futures market, where it is possible to trade in the same stock, for delivery on a future date. Let us say the stock future is selling for Rs. 120, delivery date being 20 days away. This is the futures price of the same stock (F).

The difference between the two prices is nothing but the interest rate on the money for those 20 days. Therefore the relationship between the two can be shown as:

120 = 100 + (interest for 20 days)

F = S + carry costs

The logic for such pricing is that given the same amount of information about the stock at a point in time, there is no arbitrage profit to be made between the spot and the futures market. The law of one price stipulates that if the same good is traded in two markets, the price has to be the same, unless there are costs involved in buying in one market and selling in another. The presence of these costs makes it impossible to make money by buying the same good in one market and selling it at another.

If the spot price is Rs 100 and the futures price is Rs 120, traders would like to buy spot and sell futures, to take advantage of the difference in price. However, if the cost of borrowing funds to buy spot and repay the borrowing after selling the futures, is equal to Rs. 20, there is no profit in the trade.

The difference between the spot and the futures price thus adjusts to the market rates of interest, for the period between spot and futures delivery. This interest is called as 'carry cost'.

The carry cost is not a risk-free rate or a fixed interest rate, but a market-driven rate that is driven by the risk assumed by the lenders to the trading position.

The difference between the spot price and the futures price is called basis. If futures trade at a level higher than spot prices, the basis is positive. The gains to the trader will be equal to the difference between the two prices. If the trader's cost of carry is different from the basis, there is arbitrage profit to be made on the basis.

For example, assume that spot Nifty is 8200 and near month future expiring 20 days from today is at 8300. The implicit carry cost in this transaction is:

(8300 – 8200)/8200 * 365/20

= 22%

To a trader who can obtain funds at a rate lower than 22%, there is a profit to be made by buying Nifty spot (i.e., buying the underlying constituents of Nifty in the same ratio as they make-up the Nifty index) and selling the futures. If the basis is negative (futures are lower than spot), money is made by buying the futures and selling spot.

If a trader buys Nifty spot at 8200 and simultaneously sells Nifty futures at 8300, the basis of 100 is the gross arbitrage profits locked in by this trade.

After the trade, the spot and future prices are bound to change. However, given that opposite positions have been locked into at a basis of 100 points, that net position will remain unaltered on settlement date.

On settlement date, both the spot and the futures are at the same level. This is known as the spot-future convergence. The carry cost of buying spot and selling futures on settlement date is zero, since settlement is on the same day as the contract expiration day. Therefore, on expiration day, spot and future prices of the same underlying is identical.

- **Spot-Future Arbitrage**

Sometimes the spot price and the futures price for the same stock vary much more than what is justified by a normal rate of interest (cost of carry). There is then the scope to create equal but opposite positions in the cash and futures market (arbitrage) using lower cost funds.

For example, on November 3rd, 2015, stock XYZ was selling in the cash market at Rs 3984 and on the same date, futures (delivery November 27th) were selling at Rs 4032.

Buy XYZ in the cash market Rs. 3984

Sell XYZ futures Rs. 4032

Difference in prices Rs. 48

Profit from the transaction: (48/3984) *365/24

= 18.32% p.a.

On the settlement date, the contract will expire and be closed out automatically at the settlement price. Since opposite positions have been taken in the two markets, the profit is locked in provided both the positions are closed at the same price, which is possible given the spot-future convergence at settlement. Arbitrage funds work on this principle.

1.9.2 Options

a. Option Terminology

- An option is an option to buy or sell a security or an underlying on a future date, at a pre-determined price (called the exercise price or strike price).
- The buyer pays a premium to the seller, for buying the option. The option can be exercised by the buyer on a later date.
- If the exercise date of the option is pre-determined and set as the date on which the option will expire, such an option is called a European option.
- If the option can be exercised at any point of time before the expiry date, such an option is called an American option.
- An option to buy a security is called a call option; an option to sell a security is called a put option.
- The seller of the option is also called the writer of the option. The buyer is the investor in the option.

b. Contract Specification

The strike price, or the price at which the option can be exercised, will be pre-specified by the exchange. The exchange specifies a range of option contracts, based on the previous day's settlement prices.

The buyers and sellers trade the option premium. Therefore the value or price of an option refers to the premium that is the market-determined value. The strike prices are defined by the exchange as a contract specification.

The strike prices are provided by the stock exchange where the options are traded. The strike prices and the interval will depend upon the level of the index for index option and the volatility of the underlying stock for individual stock options. The exchange will announce equal number of in-the-money (ITM) and out-of-the-money (OTM) contacts and one at-the-money (ATM) contract.

c. In-the-Money, At-the-Money and Out-of-the-Money Options

An option is bought at a premium that prevails at the time of purchase, much before the expiration date. Depending upon the volatility in the market for the underlying, the premium is traded and changes in value.

The trader in options (buyer or seller) compares what he holds with the market values to ascertain the relative position.

For example, if an option to buy Nifty 50 at 8100 was bought (Nifty long call) at a premium of Rs. 116, the Nifty 50 value should be above 8216 for the option to begin to make money. If Nifty 50 value rises to 8300, the option is in-the-money (ITM). The likelihood if it being exercised has now gone up. The premium of an in-the-money option will move up.

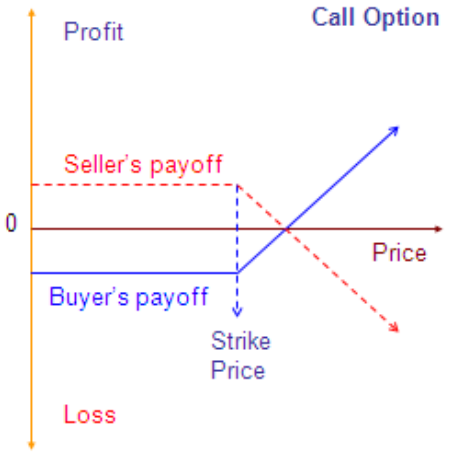
On the other hand, if Nifty falls to 8050, the option will result in a loss, if exercised. The buyer will pay 8216 for an underlying whose value is 8050. The option is now out-of-the-money (OTM) and is unlikely to be exercised. The premium for an OTM contract will go down. If the underlying is equal to the break-even point, the option is at-the-money (ATM).

d. Option Pay-offs

An option contract features an asymmetric pay-off. The upside and the downside are not uniform.

- **Pay-off: Long Call**

The buyer of a call option pays a premium to the seller and buys the option to buy the underlying security, at the strike price. If the market price is higher than the strike price on the exercise date, the buyer will exercise the option and make profits (solid line moving up). See illustration alongside.

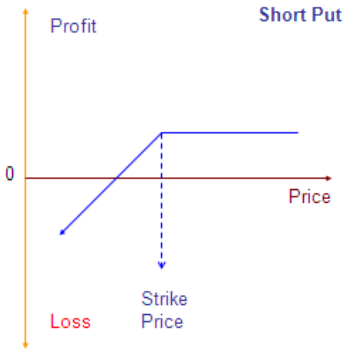


The breakeven point is the crossover into the profit area. Since the buyer paid a premium, profit roll in after prices have moved to strike plus premium (break-even point).

If the market price is below the strike price, the buyer will not exercise the option but allow it to expire.

The losses to the buyer in this case are limited to the premium paid (Flat solid line in the loss area). Seller's pay-off mirrors the buyer's pay-off. The dotted line is the pay-off the seller of the call option. The profit is limited to the premium if the price goes down, and loss is unlimited if it goes up.

- **Pay-off: Short Put**



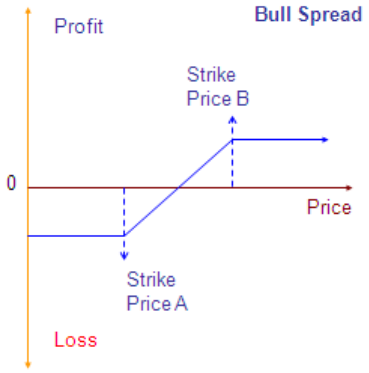
Selling the put option at a given strike price with the view that the price of the stock will not fall below the strike price. Any increase in price of the underlying will not translate into higher profits, since the view is about prices not falling below a threshold.

If the options are in the money, higher premium can be earned on the option. Break-even point is the strike price minus the premium received for the option. Maximum profit from the

position is equal to the option premium received.

Loss increases when prices fall below the strike price, and the seller is obliged to settle the underlying at the strike price (now higher than the market price).

- **Pay-off: Bull Spread**



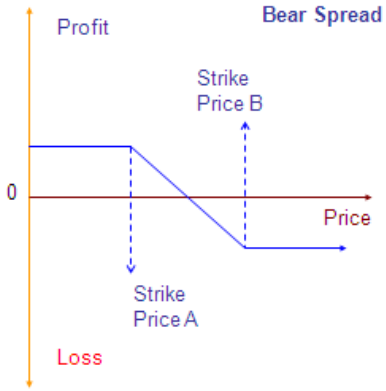
  - Buying a call option at strike price A and selling a call option at strike price B or
  - Buying a put option at strike price A and selling a put option at strike price B

Investor is of the view that the market may not fall, but still likes to cap the downside risk. The expectation is for the price at expiry to be above B, but not below A. A protection-oriented strategy that is willing to cap gains, in return for a cap of losses. This strategy is volatility neutral.

Profit is limited to the difference between A and B and the cost of the spread (premium received less premium paid). If the price at expiry closes above B, maximum gain is the option premium received. If the price at expiry closes below A, maximum loss is limited to option premium paid.

- **Pay-off: Bear Spread**

Selling a call option at strike price A and buying a call option at strike price B or



Selling a put option at strike price A and buying a put option at strike price B. Investor is of the view that the market may not rise, but still likes to cap the downside risk. The expectation is for the price at expiry to be below A, but not above B. A protection-oriented strategy that is willing to cap gains, in return for a cap of losses. This strategy is volatility neutral.

Profit is limited to the difference between A and B and the cost of the spread (premium received less premium paid). If the price at expiry closes above B, maximum gain is the option premium received. If the price at expiry closes above B, maximum loss is limited to option premium paid.

e. B-S Option Pricing Model

The formula used to arrive at the value of an option, is called the 'Black-Scholes' option-pricing model. The theoretical price of an option is determined as:

$OP = S\,N(d1) - Xe^{-rt}\,N(d2)$

Where

$d1 = \{\ln[S/X]+\{r+v^2/2\}t\} / v*\sqrt{t}$

$d2 = d1 – v*\sqrt{t}$

OP = Option price

S = Price of the underlying

X = strike price

t = time to expiration

r = risk free rate (continuously compounded)

v = annualized volatility of the underlying

N(x) = standard normal cumulative distribution function

e = exponential function

This complicated model can now be easily used to compute the option prices, as there are programs that will apply the formula and deliver the end result, once the variables are keyed in. The key thing to understand is that changes in the volatility of the underlying, will bring about changes in the value of the option, and alter the pay offs for the buyer and seller.

f. Time Decay

Options have a fixed expiry date, after which they are worthless. Therefore an option must lose value over time as it nears the expiry date. This is called time decay in an option.

If the prices of the underlying moves favourably before the expiry date, the option will be in the money and benefit the buyer. However, the time frame available for a favourable price movement for the buyer of an option is limited to the distance to expiry date. If the option is out of the money by expiry date, it becomes worthless. Therefore, greater the time to expiry, higher the time value of an option.

If an option is at or out of the money, it has little time to make a favourable move. Therefore it decays faster, closer to expiry. An out of the money options is therefore bought only with longer time to expiry.

Time decay works to the disadvantage of option buyers and to the advantage of option sellers.

1.10. Using Derivatives in Hedging, speculation and Arbitrage

Derivatives are typically used for three purposes:

- Hedging
- Speculation
- Arbitrage

1.10.1 Hedging

When an investor has an open position in the underlying, he can use the derivative markets to protect that position from the risks of future price movements. This is particularly true when the underlying portfolio has been built with a specific objective in mind, and unexpected movements in price may place those objectives in risk.

Example

An investor has saved for the education of his child. The portfolio is made up of an index fund that invests in the Nifty 50. The investor has been systematically investing in this product over the last 15 years. In the next year, the child would step into college and the investor is keen to liquidate the investment to fund the education expense. The current value of the investment is Rs. 10 lakhs. What are the choices to the investor?

a. The investor can stay invested until he needs money one year from now. If the equity market falls in that period, the value of the investment will reduce.
b. The investor can redeem the investment now, and keep the proceeds in a bank account for another year.
c. The investor can enter into a contract to sell his portfolio one year from now, at a price to be determined today.

Option (a) is risky. If the equity market moves up, the investor gains; but if it falls in the next year, there would be a loss. Option (b) is conservative, and the investor will lose any possible gain from the equity portfolio. Option (c) represents a derivative contract. What would the investor do if he chooses option (c)?

- **Hedging Using Futures**

The investor looks up the markets to find the price of the index futures (Nifty 50 futures, S&P BSE Sensex futures or SX40 futures) contracts expiring one year from today and sells enough lots to lead to a delivery position of Rs. 11.5 lakhs. He finds a buyer who is willing to pay that price. The investor has entered into a contract to sell the index one year later, at a value of Rs. 11.5 lakhs. This is a hedge that uses a futures contract.

The index equity portfolio that the investor holds is his long position. It is already invested and it has a value that changes as the index changes in value over time. The future is the derivative position on the index.

How does the derivative modify the profit or loss to the investor?

Consider the portfolio position of Rs. 10 lakhs. A year from now, there are three possibilities: The value goes up, goes down or remains the same. Assume the following:

a. The index goes up, leading to a portfolio value of Rs. 15 lakhs.

b. The index remains the same, leading to a portfolio value of Rs. 10 lakhs.

c. The index goes down, leading to a portfolio value of Rs. 5 lakhs.

- **Payoff Structure**

What happens a year later, when the investor also holds derivative positions as we had proposed earlier?

A. Sale of index Futures at Rs. 11.5 Lakhs (Futures Position)

The investor had already decided the price at which he will sell index, a year earlier. Therefore this contract will be executed at the current market price, and the difference in cash will be paid to the investor. The profit or loss will be as follows:

- If the index goes up, leading to a portfolio value of Rs. 15 lakhs
  - The futures contract will result in a loss as the investor will sell at Rs. 11.5 lakhs, while the market is at Rs. 15 lakhs leading to a loss of Rs. 3.5 lakhs.
- If the index remains the same, leading to a portfolio value of Rs. 10 lakhs.
  - The futures contract will result in a profit, as the investor will sell at Rs. 11.5 lakhs, leading to a profit of Rs. 1.5 lakhs.
- The index goes down, leading to a portfolio value of Rs. 5 lakhs.
  - The futures contract will result in a profit as the investor will sell at Rs. 11.5 lakhs, while the market is at Rs.5 lakhs, leading to a profit of Rs. 6.5 lakhs.

Let's see what the net position of the investor is if he sold the index at Rs. 11.5 lakhs in the futures market while his underlying cash position was Rs. 10 lakhs.

Market Price	Portfolio Position	Short Futures Position	Net Position
Rs. 10 lakhs	• Sell at Rs.10 lakhs • No profit or loss	• Sell at Rs. 11.5 lakhs • Buy at Rs. 10 lakhs	• Rs. 11.5 lakhs • *No profit or loss*

		• Profit Rs. 1.5 lakhs	*from portfolio+1.5 lakhs from futures*
Rs. 15 lakhs	• Sell at Rs.15 lakhs • Profit Rs.5 lakhs	• Sell at Rs. 11.5 lakhs • Buy at Rs. 15 lakhs • Loss Rs. 3.5 lakhs	• Rs. 11.5 lakhs • *+ Rs. 5 lakhs from portfolio* • *- Rs. 3.5 lakhs for futures*
Rs. 5 Lakhs	• Sell at Rs. 5 lakhs • Loss Rs. 5 lakhs	• Sell at Rs. 11.5 lakhs • Buy at Rs. 5 lakhs • Profit Rs. 6.5 lakhs	• Rs. 11.5 lakhs • *- Rs 5 lakhs from portfolio* • *+ Rs. 6.5 lakhs from futures*

When the investor sold futures at Rs. 11.5 lakhs, he ensured that he got a net amount of Rs. 11.5 lakhs from the investment, no matter how the market behaved. This is called hedging. By using a futures contract what the investor managed was to protect the value of his investments from adverse market movements.

- **Hedging Using Options**

A similar outcome, but with asymmetrical payoffs (not a uniform 11.5 lakhs net position irrespective of the market) can be achieved using options. The investor likes to benefit from a possible increase in the index. He is only worried about a possible loss if the index were to fall. In other words, he likes to participate in the upside, but seeks protection from any downside risk. He can buy a put option on the index for an exercise price of Rs. 11.5 lakhs, exercisable in a year. He pays a premium for this position.

The investor may or may not sell the index a year from now. It depends on the value of the index in the market. If the value is more than Rs. 11.5 lakhs, he will not exercise the option to sell, because the market price is more than what he would get if he sold. If the value is less than Rs. 11.5 lakhs, he will exercise the option and sell the index at Rs. 11.5 lakhs. In this case, he gets Rs. 11.5 lakhs even if the market falls.

Market Price	**Portfolio Position**	**Long Put Option Position**	**Net Position**
Rs. 10 lakhs	• Sell at Rs. 10 lakhs • No profit or loss	• Option is exercised as it is in the money.	• Rs.11.5 lakhs • *No profit or loss from portfolio* • *Profit of Rs. 1.5*

			lakhs from put option exercised • *Less cost of premium on option position*
Rs. 15 lakhs	• Sell at Rs. 15 lakhs • Profit Rs. 5 lakhs	• Option expires unexercised as it is out of the money	• Rs. 15 lakh • *Profit of Rs. 5 lakhs from portfolio* • *Less cost of option premium*
Rs. 5 Lakhs	• Sell at Rs. 5 lakhs • Loss Rs. 5 lakhs	• Exercise the option to sell at Rs. 11.5 lakhs • Profit Rs. 6.5 lakhs	• Rs. 11.5 lakhs • *Loss of Rs. 5 lakhs on portfolio position* • *Profit of Rs. 6.5 lakhs less premium from option position*

- **Futures vs. Options in Hedging**

The following differences are noticed in using futures or options to hedge the position:

a. The option premium reduces the net position value, even if the market price did not move. Option comes at a specific cost by way of premium.

b. The loss is limited to the premium amount if the underlying moves against the option position (markets moving up when the investor has bought a put option).

c. The futures hedge keeps the net position value constant, irrespective of market movement. What is lost in portfolio value is gained in futures and vice versa.

d. In the options hedge, the gain if the market price moved up depends on how much the portfolio position is participating in the upside, after accounting for the option premium.

e. The gain if the market price moved down depends on the option position paying off on the downside after accounting for the option premium.

The payoff in a futures position is the same (symmetrical) whether the market price moves up or down. The payoff in the options position is different (asymmetrical) for up and down

markets and depends on how much was the movement in prices, and what was the premium paid.

1.10.2 Speculation

A speculative trade in a derivative is not supported by an underlying position in cash, but simply implements a view on the future prices of the underlying, at a lower cost.

A buyer of a futures contract has the view that the price of the underlying would move up and he would gain having bought it at a lower price, much earlier. The cost of this long position is the margin, which is about 5% of the value of the underlying.

If the buyer bought 100 equity shares at Rs. 200 each, with the view that the price would move up to Rs. 250 per share, he invests Rs. 20,000. If the price goes up to Rs. 250, he makes a return of 25%. If it falls instead, he makes a loss.

If the view is that price will go up and he instead buys 100 futures contracts of the share at a price of Rs. 200, he pays only 3% of the value as margins. His investment is only Rs. 600. Assume that the price moves up to 250 as expected, his futures contract settles with a profit of Rs. 5000.

He would make a net gain of 5000 over the period of the contract (recall exposure margin will be MTM on everyday basis and credit or debit his account, adding up to the final gain of Rs.5000 over that period). His gains are surely much higher than what he can do in the cash market. However if his view turns out to be wrong, and the market prices actually fall, his position will make a loss and he needs to close it or bear the MTM risk.

Speculative positions are about implementing a view and a buyer can close his position any time between purchase and expiry date, to book a profit or loss.

1.10.3 Arbitrage

If the price of the underlying is Rs. 100 and the futures price is Rs. 110, anyone can buy in the cash market and sell in the futures market and make the costless profit of Rs. 10. The Law of One Price stipulates that this difference in prices should represent the cost. In the futures market, we call this the carry cost. The Rs. 10 difference represents the cost of buying at Rs. 100 today, selling at Rs. 110 in the future, and repaying the amount borrowed to buy in the cash market with interest.

Given the “one-price” rule (the underlying is the same), the interest costs should be equal to the difference in prices. If that holds true always, there would be no arbitragers. Arbitrageurs are specialist traders who evaluate whether the Rs. 10 difference in price is higher than the cost of borrowing. If yes, they would exploit the difference by borrowing and buying in the cash market, and selling in the futures market. If they settle both trades

on the expiry date, they will make the gain of Rs. 10 less the interest cost, irrespective of the settlement price on the contract expiry date, as long as both legs settle at the same price.

Consider the payoff in an arbitrage trade between cash and futures, where the long position in cash was at Rs. 100 and the short futures market position was at Rs. 110.

Market Price At Settlement	Long Portfolio Position	Short Futures Position	Net Profit/Loss
Rs. 100	• Bought at Rs. 100 • Sold at Rs. 100 • No profit; no loss	• Sold at Rs. 110 • Bought at Rs. 100	• + Rs. 10 from futures • Net Rs. 10
Rs. 150	• Bought at Rs. 100 • Sold at Rs. 150 • Profit of Rs. 50	• Sold at Rs.110 • Bought at Rs.150 • Loss of Rs.40	• +Rs. 50 from portfolio • -Rs. 40 from futures • Net Rs. 10
Rs. 50	• Bought at Rs. 100 • Sold at Rs. 50 • Loss of Rs. 50	• Sold at Rs. 110 • Bought at Rs. 50 • Profit of Rs. 60	• -Rs. 50 from portfolio • +Rs. 60 from futures • Net Rs.10

It can be seen that the arbitrageur who bought at the cheaper market and sold at the costlier market, made the difference as profit (less the actual interest cost). It has to be remembered that the actions of several arbitrageurs would actually increase the price in the cash market, where their buying action would increase the price; and reduce the price in the futures market where their selling action would reduce the price. The difference between the two prices would therefore fall, so as to be equal to the interest costs, due to the actions of the arbitrageurs. Arbitrage can be self-defeating, provided the cost of borrowing is not different for different players.

Benefits and Costs of Derivatives

The applications of derivatives in hedging, speculation and arbitrage demonstrate the following key benefits and costs of derivative:

- Enable hedging and better management of risk, by providing various alternative ways to structure symmetrical and asymmetrical pay offs.

- Enhance the liquidity of underlying markets and reduce overall costs of trading for cash and derivatives. The availability of derivatives increases participation, information dissemination and price discovery.
- Over the counter contracts and poorly regulated derivative markets have led to several instances of liquidity crises and counter party risks when large positions are sought to be unwound at short notice, after the risk surfaces.
- Complexity of the product makes participation, monitoring and regulation a challenge for the exchanges and regulators.

1.11. Derivatives Market Indicators

Several technical indicators are used to study derivative markets. Open interest (OI) shows the volume of open positions that have not been squared up. It indicates the trading activity in a contract and flow of money into the market. Higher OI connotes higher liquidity and lower transaction cost. It is seen along with price movements to confirm market trends. An increase in open interest in a situation of rising prices confirms an upward movement while a decrease in OI accompanied by a decrease in prices indicates a falling market. An increase or decrease in prices while OI remains flat indicates a likely trend reversal. Implied volatility (IV) is a key indicator in option markets. Changes to IV alter the value of options. Traders also form expectations for IV and trade on that basis.

Put-call ratio (PCR) is computed by dividing the number of puts (contracts) by the number of calls (contracts). Since the strike price of options is exchange-determined, the number of calls is indicative of buying interest and puts the selling interest. If calls are more than puts, the market is bullish, and the PCR is less than 1. As the markets move down, PCR increases, indicating bearishness.

PCR is used as a contrarian indicator by traders, when it trades at extreme values. PCR close to 0.9 or more indicates a very high level of bearishness, and traders may be willing to take contrarian bets that the market would bottom out. Very low PCR at 0.6 or less indicates a high level of bullishness and can be interpreted as an overbought market.

Rollover is the process of carrying over a futures position from one contract period to the next. This is done by closing the existing position and entering into a similar position for the next series. A high rollover percentage is taken as an indicator of the strength in the market sentiment. Rollover data combined with the cost of carry is used as an indicator of market direction. High rollover with increasing cost of carry is bullish while high rollover with the declining cost of carry or the basis turning negative is a bearish indicator.

1.12. Foreign Exchange Market

The foreign exchange market is the market to determine the price of different currencies in terms of one another in order to enable trade between countries and to provide a way to transfer currency associated risks arising from economic transactions. The legal framework for the conduct of foreign exchange transactions in India is provided by the Foreign Exchange Management Act, 1999. Foreign exchange transactions in India happens both on an OTC market and an exchange traded market. The principle participants in the foreign exchange market are the authorized dealers (AD), foreign exchange brokers and customers. The authorized dealers are the market makers who give buy and sell quotes for different currency pairs. The brokers act as intermediaries who find the best quotes for their clients who may be the end users of the currency.

For dealing in foreign exchange market, the intermediaries need to be registered with RBI. Authorized dealers are banks and others who are licensed to deal in the foreign exchange market by the RBI. RBI categorizes ADs into category I, II and III. The eligibility norms and scope of permitted activity differ for each category. The RBI also appoints Full Fledged Money Changers who are authorized to purchase foreign exchange from resident and non-residents visiting India and to sell foreign exchange for specific purposes such as private visits and business visits up to the limit fixed by RBI.

Brokers are intermediaries who enable currency trades of their client by making available the bid and ask quotes provided by different dealers. They compare rates and execute trades for their clients. They do this for a commission.

The customers are the end users of foreign exchange. They may be the government, banks, public sector units and private companies, FIIs and individuals and others who need foreign exchange for their transactions.

Authorized dealers provide quotes for currency pairs such as USDINR, EURINR, GBPINR and so on. The quote defines the price of one unit of the first currency in a pair in terms of the other. This is the global market practice. The first currency is called the base currency and the second one is the quotation currency. For example, a quote of EURINR 71.8627 reads as a price of INR 71.8627 for one unit of Euro. The Euro is the base currency and the rupee is the quotation currency in this example.

1.12.1 Market Segments

The Indian foreign exchange market has a spot market where currency is transacted for immediate settlement and a derivative market where the transactions are settled at a future date. The spot market is an OTC market while in the derivatives segment there is an OTC derivative market as well as exchange traded derivatives market.

a. OTC Spot Market

The spot market has an interbank market and a retail or merchant market. Interbank market is the market for trade between banks, which is the largest segment in the spot market. The banks quote prices for both buying and selling the currency. This is called market making. Banks as market makers give two way quotes in the interbank market. The quote for buying is called the bid price and the quote for selling is called the ask price. This is from the point of view of the market maker. Assume a bank has quoted USDINR 65.5200/65.5225. An entity seeking to buy dollars will look at the ask price of the market maker, which is 65.5225. This is the price at which the bank is willing to sell dollars. To sell dollars the quote to check is bid price of the bank at 65.5200. This is the price the market maker has quoted to buy dollars.

The government of India, Oil PSUs and FIIs dominate the merchant segment of the market. The interbank rate (IBR) forms the basis for pricing large value transactions. Banks also publish a standard rate for the day called the card rate that is used for small value transactions. In periods of high volatility the card rate may be revised during the day too. The card rates offered by different banks may vary significantly.

RBI compiles and publishes reference spot rates for various currency pairs such as USD/INR and EUR/INR. The rates are arrived at by averaging the mean of the bid / offer rates polled from a few select banks between 11.45 am and 12.15 pm every weekday (excluding Saturdays). The contributing banks are selected on the basis of their standing, market-share in the domestic foreign exchange market and representative character. The Reserve Bank periodically reviews the procedure for selecting the banks and the methodology of polling so as to ensure that the reference rate is a true reflection of the market activity.

- **Trade & Settlement Dates**

A significant majority of the OTC trades are conducted on trading platforms such as the FX Clear of the CCIL, FX Direct offered by IBS and Financial Technologies Ltd and D2 Platform and Reuters Market Data System both offered by Reuters.

The settlement of transactions done in the spot market happens on gross settlement basis. This means that if the party to a transaction sells one million USD at a price of 65, then on settlement date one million USD is delivered by the selling party and receives Rs.65000000 in exchange. The date of settlement of a spot transaction is called spot value date and is different from the trade date. The trade date is the date on which the terms of the transaction, such as currency, price, amount and value date are agreed upon by the parties to the transaction. Typically, the value date is two business days after the trade date. The buying and selling legs of the transaction may be settled in different centres. In the event that either centre is closed on T+2, then the next business day when both centres are open will be fixed as the value date for the transaction.

It is possible for a transaction to be settled before the spot value date. The rate at which the transaction will be settled is derived from the spot rate. If the settlement is done on the

trade date itself, the derived rate is called the 'cash' rate. If it is settled the next day after trade date, the rate is called 'tom' rate.

b. Currency Derivatives Market

A currency derivative is a contract that derives its value from the spot currency prices. Derivative contracts are those that are traded today but settled at a date in future (i.e. trades that do not follow a T+2 business day settlement of spot transactions). The terms of trade such as the price, volume and settlement date are decided on the trade date. The primary function of the derivative market is to enable risk transfer by providing a way to hedge the currency risk arising from a transaction. The merchant segment of the derivative market is more active than the interbank market. The Indian foreign exchange market has an OTC derivatives market as well as an exchange traded derivatives market.

c. OTC Derivatives Market

The OTC markets for derivatives deal in forward contracts, foreign exchange swaps and options. The most widely used instruments are the forward contracts and the foreign exchange swaps.

According to RBI guidelines, any resident Indian desiring to book an OTC derivative contract should have an underlying trade contract which could establish exposure to foreign currency. The amount and tenor of the contract booked has to be equal to or less than the amount and tenor of foreign exchange exposure as suggested by the underlying trade contract. The market participant is expected to submit the trade contract to bank within 15 days of booking the derivative contract.

In the forward OTC market, the terms of the contract are agreed upon on the trade date for execution at a future date, decided between the parties to the contract. Authorized dealers (Category I) are permitted to issue these contracts. For example, an importer who expects to make payment in USD for a transaction one month later may hedge against the risk of the rupee depreciating (and therefore having to pay more to buy the dollar) by entering into a one month forward contract to buy the dollar at a price decided today. The rate decided today is the one month forward rate and will depend upon the premium or discount in the market (we will learn more about this later in the chapter). The contract will be settled one month hence. Even if the rupee depreciates the importer is not affected because the forward contract has locked in the price.

While it is possible to book forward contracts of any maturity, contracts with upto one year see higher liquidity and more efficient quotes. A forward contract entered into can be settled early, extended or cancelled. The rates will be amended accordingly. The terms of amendment will depend upon the bank and the client and rules prescribed by the Foreign Exchange Dealers Association of India (FEDAI) and RBI in this regard. The settlement for forward contracts can be on gross basis where the full value is paid and received or net basis

where only the difference between the contracted price and the spot reference price on the settlement date is paid and received, as decided by the participants.

A foreign currency swap is an instrument used to hedge risk arising out of the exposure to a currency by the exchange of liability in one currency for a liability in another currency. It allows participants to use a comparative advantage they may have in borrowing in one currency relative to another.

Authorized dealers (Category I) are allowed to sell call and put options to resident Indians with foreign currency exposure to hedge the position. A call option gives the buyer of the option the right to buy the currency at a strike price defined at the time of entering into the contract. An importer can protect against depreciation in the rupee by buying a call option at a strike price suitable to him. On maturity, if the spot rate is higher than the strike price, the buyer of the option has protected his position and will exercise the contract. If the spot price is lower than the strike price, the contract will be allowed to expire and the loss to the buyer will just be the premium paid to buy the contract. A put option works similarly, but it gives the buyer of the option the right to sell at the strike price. This will be exercised if at maturity the spot price is lower than the strike price. Persons expecting a foreign currency inflow can protect the value by buying put options. In terms of currency pairs, in OTC market the client can get quotes for any currency pair.

d. Exchange Traded Derivatives

Futures and options are the exchange traded derivatives available on recognized stock exchanges permitted to deal in currency derivatives by SEBI and the RBI. Exchange traded currency derivatives can be used to hedge a currency position, speculate on the future direction of the market and to benefit from arbitrage opportunities.

A futures contract is a standardized forward contract, traded on an exchange, to buy or sell a certain underlying asset or an instrument at a certain date in the future, at a specified price. Some of the common terms used in the context of currency futures market are given below:

- **Spot price:** The price at which the underlying asset trades in the spot market.
- **Futures price:** The current price of the specified futures contract
- **Contract cycle:** The period over which a contract trades. The currency futures contracts on the SEBI recognized exchanges have one-month, two-month, and three-month up to twelve-month expiry cycles. Hence, these exchanges will have 12 contracts outstanding at any given point in time.
- **Value Date/Final Settlement Date:** The last business day of the month will be termed as the Value date / Final Settlement date of each contract. The last business day would be taken to be the same as that for Inter-bank Settlements in Mumbai. The rules for Inter-bank Settlements, including those for ‘known holidays’ and ‘subsequently declared

holiday' would be those as laid down by Foreign Exchange Dealers' Association of India (FEDAI).

- **Expiry date:** Also called Last Trading Day, it is the day on which trading ceases in the contract; and is two working days prior to the final settlement date.
- **Contract size:** The amount of asset that has to be delivered under one contract. Also called as lot size. In the case of USDINR it is USD 1000; EURINR it is EUR 1000; GBPINR it is GBP 1000 and in case of JPYINR it is JPY 100,000.
- **Initial margin:** The amount that must be deposited in the margin account at the time a futures contract is first entered into is known as initial margin.
- **Marking-to-market:** In the futures market, at the end of each trading day, the margin account is adjusted to reflect the investor's gain or loss depending upon the futures closing price. This is called marking-to-market.

Contract specification: USDINR, EURINR, GBPINR and JPYINR Currency Derivatives	
Underlying	Foreign currency as base currency and INR as quoting currency
Market timing	9:00 AM to 5:00 PM
Contract Size	USD 1000 (for USDINR), EUR 1000 (for EURINR), GBP 1000 (for GBPINR) and JPY 100,000 (for JPYINR)
Tick Size	Re. 0.0025
Quotation	The contract would be quoted in Rupee terms. However, outstanding position would be in USD, EUR, GBP and JPY terms for USDINR, EURINR,GBPINR and JPYINR contracts respectively
Available contracts	Maximum of 12 calendar months from current calendar month. New contract will be introduced following the Expiry of current month contract.
Settlement date	Last working day of the month (subject to holiday calendars) at 12 noon
Last trading day (or Expiry day)	12.30 p.m. on the day that is two working days prior to the settlement date
Settlement Basis	Daily mark to market settlement will be on a T +1 basis and final settlement will be cash settled on T+2 basis.
Daily settlement Price	Daily mark to market settlement price will be announced by the exchange, based on volume-weighted average price in the last half an hour of trading, or a theoretical price if there is no trading in the last half hour.
Settlement	Cash settled in INR

Final Settlement Price	The reference rate fixed by RBI on last trading day or expiry day.
Final Settlement Day	Last working day (excluding Saturdays) of the expiry month. The last working day will be the same as that for Interbank Settlements in Mumbai. The rules for Interbank Settlements, including those for 'known holidays' and 'subsequently declared holiday would be those as laid down by FEDAI.

Futures contracts provide the same benefits of hedging as a forward contract. Persons who have payment obligations in a foreign currency in the future can buy a currency pair future that will lock in the price today. Depreciation in the rupee will not affect them. They will still need to pay on the price decided at the time of buying the future contract. On the other hand, persons excepting to receive a sum in foreign currency would like to protect the rupee value from the effects of rupee appreciation. They can do this by selling the relevant currency pair future and at maturity receive the price decided at the time of entering the contract, irrespective of the price movement.

e. Options

SEBI and RBI permitted introduction of USDINR options on stock exchange from July 30 2010.

Option: It is a contract between two parties to buy or sell a given amount of asset at a pre-specified price on or before a given date.

- The right to buy the asset is called **call option** and the right to sell the asset is called **put option**.
- The pre-specified price is called as **strike price** and the date at which strike price is applicable is called **expiration date**.
- The difference between the date of entering into the contract and the expiration date is called **time to maturity**.
- The party which buys the rights but not obligation and pays premium for buying the right is called as **option buyer** and the party which sells the right and receives premium for assuming such obligation is called **option seller/ writer**.
- The price which option buyer pays to option seller to acquire the right is called as **option price or option premium**
- The asset which is bought or sold is also called as an underlying or **underlying asset**.

Buying an option is also called as taking a long position in an option contract and selling is also referred to as taking a short position in an option contract.

Option gives a right but does not impose an obligation on the buyer to buy or sell depending upon what type of option has been bought. In a futures contract there is an obligation to buy or sell, depending upon the nature of futures bought.

The buyer of a call option will be 'in the money' and exercise the call option as long as the spot price of the currency at the time of maturity is higher than the strike price. The position will break even at (strike price +premium paid) and at any level of the spot price after that the position can make unlimited profits. The seller of the option believes that the underlying currency will not depreciate. The profits of the seller will be limited to the premium earned but the losses can be unlimited.

The buyer of a put option believes that the underlying currency will appreciate and therefore buys the right to sell at the strike price. The position is in the money if at maturity the spot price is lower than the strike price. Breakeven is achieved at a spot price level of (strike price-premium) and unlimited profits are possible at all levels of the spot price below this. The seller or writer of the put option believes that the underlying currency will not appreciate. The seller's profits are limited to the premium but the losses can be unlimited.

f. Determinants of Option Premium

The option premium is a function of the spot price, strike price, volatility in the currency pair, time to maturity and the risk free interest rate on the base currency and quoting currency. Assuming that other factors that affect the option premium remains unchanged, and increase in the spot price increases the premium for a call option and decreases the premium for a put option. An increase in the strike price reduces the premium for call option and increases it for a put option. A longer time to expiration and higher volatility has a positive impact on the premium for both the call and put option. An increase in the interest rate differential between the two currencies pushes up the premium for the call option but reduces it for a put option.

Contract specification: USDINR currency option	
Underlying	USDINR spot
Market timing	9 AM to 5 PM
Type of option	European
Contract Size	USD 1000
Tick Size (Rupees)	0.0025
Quotation	The premium will be quoted in INR terms. However, outstanding position would be calculated in USD terms
Trading Cycle	Three serial monthly contracts followed by one quarterly contracts of the cycle March/June/September/December.

Expiry Day / Last Trading Day	Two working days prior to the last business day of the expiry month at 12 noon.
Settlement Basis	Daily mark to market settlement will be on a T +1 basis and final settlement will be cash settled on T+2 basis.
Settlement Price	RBI reference rate for last trading date of the contract
Settlement	Cash settled in Indian Rupees
Final Settlement Day	Last working day (excluding Saturdays) of the expiry month. The last working day will be the same as that for Interbank Settlements in Mumbai.

1.13. Pricing of Forwards & Futures and Concept of Interest Rate Parity

Let us assume that risk free interest rate for one year deposit in India is 7% and in USA it is 3%. You as smart trader/ investor will raise money from USA and deploy it in India and try to capture the arbitrage of 4%. You could continue to do so and make this transaction as a non-ending money making machine. Life is not that simple! And such arbitrages do not exist for very long.

We will carry out the above transaction through an example to explain the concept of interest rate parity and derivation of future prices which ensure that arbitrage does not exist.

Assumptions:

1) Spot exchange rate of USDINR is 60 (S)
2) One year future rate for USDINR is F
3) Risk free interest rate for one year in USA is 3% (R_{USD})
4) Risk free interest rate for one year in India is 7% (R_{INR})
5) Money can be transferred easily from one country into another without any restriction of amount, without any taxes etc.

You decide to borrow one USD from USA for one year, bring it to India, convert it in INR and deposit for one year in India. After one year, you return the money back to USA.

On start of this transaction, you borrow 1 USD in US at the rate of 3% and agree to return 1.03 USD after one year (including interest of 3 cents). This 1 USD is converted into INR at the prevailing spot rate of 60. You deposit the resulting INR 60 for one year at interest rate

of 7%. At the end of one year, you receive INR 4.2 (7% of 60) as interest on your deposit and also get back your principal of INR 60 i.e., you receive a total of INR 64.2. You need to use these proceeds to repay the loan taken in USA.

Two important things to think before we proceed:

- The loan taken in USA was in USD and currently you have INR. Therefore you need to convert INR into USD
- What exchange rate do you use to convert INR into USD?

At the beginning of the transaction, you would lock the conversion rate of INR into USD using one year future price of USDINR. To ensure that the transaction does not result into any risk free profit, the money which you receive in India after one year should be equal to the loan amount that you have to pay in USA. We will convert the above argument into a formula:

$S(1+R_{INR})= F(1+R_{USD})$

Or, $F/ S = (1+R_{INR}) / (1+R_{USD})$

Another way to illustrate the concept is to think that the INR 64.2 received after one year in India should be equal to USD 1.03 when converted using one year future exchange rate.

Therefore,

F/ 60 = (1+.07) / (1+.03)

F= 62.3301

Approximately, F is equal to the interest rate difference between two currencies i.e.

$F = S + (R_{INR}- R_{USD})*S$

This concept of difference between future exchange rate and spot exchange rate being approximately equal to the difference in domestic and foreign interest rate is called the "Interest rate parity". Alternative way to explain, interest rate parity says that the spot price and futures price of a currency pair incorporates any interest rate differentials between the two currencies assuming there are no transaction costs or taxes.

A more accurate formula for calculating, the arbitrage-free forward price is as follows.

$F = S \times (1 + RQC \times Period) / (1 + RBC \times Period)$

Where

F = forward price

S = spot price

RBC = interest rate on base currency

RQC = interest rate on quoting currency

Period = forward period in years

For a quick estimate of forward premium, following formula mentioned above for USDINR currency pair could be used. The formula is generalized for other currency pair and is given below:

$F = S + (S \times (R_{QC} – R_{BC}) \times \text{Period})$

In above example, if USD interest rate were to go up and INR interest rate were to remain at 7%, the one year future price of USDINR would decline as the interest rate difference between the two currencies has narrowed and vice versa.

Traders use expectation on change in interest rate to initiate long/ short positions in currency futures. Everything else remaining the same, if USD interest rate is expected to go up (say from 2.5% to 3.0%) and INR interest rate are expected to remain constant say at 7%; a trader would initiate a short position in USDINR futures market.

Illustration:

Suppose 6 month interest rate in India is 5% (or 10% per annum) and in USA are 1% (2% per annum). The current USDINR spot rate is 60. What is the likely 6 month USDINR futures price?

As explained above, as per interest rate parity, future rate is equal to the interest rate differential between two currency pairs. Therefore approximately 6 month future rate would be:

Spot + 6 month interest difference = 60 + 4% of 60

= 60 + 2.4 = 62.4

The exact rate could be calculated using the formula mentioned above and the answer comes to 62.33.

62.33 = 60 x (1+0.1/12 x 6) / (1+0.02/12 x 6)

Concept of premium and discount and the impact of interest rates

Therefore one year future price of USDINR pair is 62.33 when spot price is 60. It means that INR is at discount to USD and USD is at premium to INR. Intuitively to understand why INR is called at discount to USD, think that to buy same 1 USD you had to pay INR 60 and you have to pay 62.33 after one year i.e., you have to pay more INR to buy same 1 USD. And therefore future value of INR is at discount to USD.

Therefore in any currency pair, future value of a currency with high interest rate is at a discount (in relation to spot price) to the currency with low interest rate.

Factors that impact exchange rates

The foreign exchange rates constantly respond to a number of economic variables, both domestic and global, which have an impact on the demand and supply of foreign currency in the short-term and long term. Some of the factors that affect the value of a currency in the foreign exchange market include the gross domestic product (GDP) growth rate, balance of payment situation, deficit situation, inflation, interest rate scenario, policies related to inflow and outflow of foreign capital. It is also a function of factors like prices of crude oil, value of against other currency pairs and geopolitical situation. These economic indicators, not only of the Indian economy but also of other countries, determine the exports and imports of the country, its attractiveness as a destination for investment through FDI as well as portfolio flows and the risks that are seen in the economy. The flow of foreign currency in and out of the country as a result of the economic situation will determine the exchange rate.

At any point in time some factors may support an appreciation in the currency while other factors may indicate a weakening or depreciation. In the short-term, the dominant factor may decide the direction of the currency movement. In the long-term the market will incorporate all the information that is relevant to the currency and decides the overall impact on the currency. The exact impact would be a function of relative health of other economies, global risk appetite among investors and market expectations.

Note: For better understanding of different products discussed in the chapter, candidates may undertake other certifications of NISM. The detailed list of various NISM certifications is available on the NISM website (www.nism.ac.in).

Sample Questions

1. **The proportion of a public issue of shares allocated to various categories of investors is decided by**
   - **a. SEBI**
   - b. Issuer
   - c. Stock exchange
   - d. Registrar and Transfer agent

2. **In a leveraged investment in an IPO, the profits to the investor depends upon**
   - a. Issue price & listing price
   - b. Cost of borrowing and period of borrowing
   - **c. Shares allotted and listing premium**
   - d. Interest paid and issue price

3. **A high turnover in a stock is an indicator of which of the following**
   - a. Higher price
   - **b. Higher liquidity**
   - c. Lower volatility
   - d. Lower returns

4. **Read the following caselet and answer the questions that follow:**

Mr. A is a conservative investor who is looking to invest in equity markets. He is evaluating shares of VKP Ltd. with a PE ratio of 22, PEG ratio of 0.98, dividend yield of 3.5.

   a. Which of the following may make VKP Ltd unsuitable for Mr. A as a conservative investor?
      - i. PEG ratio lower than 1
      - ii. A dividend yield lower than the risk free rate of interest
      - **iii. PE ratio higher than peer average**
      - iv. Dividend yield higher than dividend yield of index

   b. The PEG ratio of the company classifies it as
      - i. Overvalued
      - **ii. Undervalued**
      - iii. Low growth stock
      - iv. High growth stock

   c. Mr. A is attracted by the high dividend yield of the stock. Which of the following is a likely feature of the investment going forward?
      - i. High growth in EPS

ii. Low dividend payout
iii. High capital appreciation
iv. Low earnings growth

5. A decrease in interest rates is likely to see a greater impact on the price of which bond?

a. AAA rated 5 year bond
b. 15 year Government security
c. 30 year bond with 2 years to maturity
d. Commercial paper of company

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CHAPTER 2: KNOWING OPERATIONAL ASPECTS OF FINANCIAL TRANSACTIONS

LEARNING OBJECTIVES:

After studying this chapter, you should know about:

- Different kind of investors
- PAN, KYC process and Power of Attorney
- Dematerialisation and rematerialisation of securities
- Account opening process for NRIs
- Maintenance of investor's accounts and folios
- Change in status of special investor categories

2.1. Know Investor types and the acquisition process

2.1.1 Who can Invest?

Investors eligible to invest in the securities markets can be broadly classified into individual investors and institutional investors. Individual investors include resident investors who are competent to contract, Minors, Hindu undivided family (HUF), Non-resident Indians (NRIs) and Qualified Foreign Investors (QFIs). Individual investors invest and transact from the funds that are owned by them or borrowed by them. Typically, the ticket-size of their investments is small and these investors are spread out geographically.

Institutional investors include companies, trusts, charitable organizations and societies. They may be financial institutions, portfolio investors, pension funds, insurance funds and banks, among other. They differ from individual investors in that they need to follow, a formal process for making and executing investment decisions. The charter of the institution and the laws governing it should enable investments as a permitted activity. The apex governing body of the institutional investor, usually the Board (or Trustees, as the case may be), has to approve (or authorize) the investment decisions. There may be guidelines that stipulate rules for asset allocation, choice of securities, management of risk and return, and the like. Investment decisions have to adhere to that approved pattern. Institutional investors transact through authorized signatories who are designated to execute the documentation pertaining to investment decisions on behalf of the institution.

The documentation, eligibility, tax treatment and process of investments also depend on the investor category.

The offer document of a product or scheme specifically mentions the persons who are eligible to invest in the product or scheme on offer. Usually, the entities listed below can

invest, subject to limits and restrictions laid down by the SEBI regulations, RBI's norms, if applicable, and the offer document of the particular scheme.

- Resident Individuals
- Hindu Undivided family (HUF)
- Minors through guardians
- Registered societies and clubs
- Non-resident Indians (NRI)
- Persons of Indian Origin (PIO)
- Qualified Foreign investors (QFI)
- Banks
- Financial institutions
- Association of persons
- Companies
- Partnership firms
- Trusts
- Foreign portfolio investors (FPIs)
- Insurance companies
- Pension funds
- Mutual funds

2.1.2 Acquisition Process

Investors need to fulfil certain mandatory requirements to be eligible to invest in various investment products. These pre-requisites may be imposed by the prevalent regulations, such as the need to be KYC compliant to be eligible to use any financial product or service, or they may be defined by the product or service providers and may be specific to investing in a particular product and will be specified in the terms of offer.

2.1.3 Terms of Offer

The offer document of a financial product specifies the conditions to be fulfilled by a prospective investor and the documentation needed. Conditions may be laid down in terms of who can invest and how much can be invested in the scheme. Some products may exclude a certain category of investors from investing. For example, NRIs cannot invest in the small savings schemes of the post office. Or, a product may also be launched for a specific category of investors such as provident funds and pension funds. Investment

instruments may also have a certain minimum threshold amount for investment which may exclude small ticket investors from it, or there may be a ceiling on the maximum amount that can be invested. Pension plans of mutual funds may have an upper age restriction. Institutional investors, Hindu undivided family and individual investors not meeting the age criteria are not allowed to invest in these schemes. For example, the maximum age at entry into the National Pension Scheme (NPS) cannot exceed 60 years. Insurance products may have specifications about age, eligibility and health check requirements.

2.1.4 Regulatory Requirements

Investors must have a Permanent Account Number (PAN) issued by the Income Tax Authorities to be eligible to invest in most financial products in India. Exemptions may be given to certain category of investors or types of transactions. Barring these exempted transactions, providing PAN details is a mandatory requirement to invest in financial products and to access financial services such as banking, insurance, depository services and others.

Capital market investments made through a demat account or in physical mode requires PAN card details to be provided. Investments in deposits with the Post Office Savings Bank, Post Office Savings Schemes and Savings Certificates by investor accounts that are classified as medium and high risk(based on the amount being invested being higher than Rs. 50,000 and the balance in all other schemes not exceeding Rs. 10 lakhs), have to provide the PAN card. Making a bank Fixed Deposits exceeding Rs.50000 and insurance premium payments in excess of Rs. 50000 requires the PAN card to be provided for verification. Contributions in cash in excess of Rs. 50000 to the NPS account requires PAN details to be provided. Opening a Tier II account with the National Pension Scheme (NPS) also requires a PAN card. Life insurance products purchased with a contracted annual premium of more than Rs. 1 Lakh per policy requires the PAN details to be provided.

Similarly, the 'Know Your Customer' process has to be undergone by all investors in compliance with the regulations of the Prevention of Money Laundering Act, 2002. It imposes obligations on providers of financial services and products such as banking companies, financial institutions, mutual funds, insurance companies and other intermediaries, to verify and maintain the records of documents that establish the identity of all their investors.

2.1.5 Mandatory Investor Information

An application for buying a financial product or subscribing to a financial service must be complete with respect to certain mandatory fields in the application form, without which the application can be deemed invalid and is liable to be rejected. The mandatory fields are typically marked or highlighted so that investors do not miss providing any such information.

Name: The financial product or service is held in the name of the investor who is identified by name. In the case of mutual funds, shares and bonds, demat account, post office savings bank accounts and most company deposits a purchase application can be made by a maximum of 3 joint holders. In others, such as a fixed deposit with a bank or the senior citizens savings scheme and the NSC, there can be a maximum of two holders. A National Pension Scheme (NPS) account is held in the sole name of the subscriber. Where an investment or account can be held jointly, the investors can decide on the mode of operation. The holders may have the option to operate the investment either jointly or on either or survivor basis. The name of the first holder is used to create the investment records. All payouts, such as dividend, interest and redemptions, are made in the name of the first holder. The tax benefits from the investments and any tax liability on the income accrue to the first holder. Correspondence regarding the investments is sent to the first holder. Names of all the joint holders are however maintained in the records.

Signature: The signature of the investor is the identity of the investor in the records of the issuer. It is verified for every transaction. All valid transactions should carry the signature of the investor. In case of a joint application, the form must provide for signatures of all joint holders irrespective of the holding pattern.

Address: The address of the first holder is mandatory in order to enable physical identification of the investor's location. Address of the investor must match with the address and proof of address provided while completing the KYC formalities.

Bank account information: The application form may require the investors to provide bank account details of the sole or first holder at the time of purchase. Account number, bank and branch details, type of account, IFSC code and MICR code has to be provided. This is the account in which the interest, dividends and redemption proceeds will be credited. Mutual funds and other investments in the capital markets such as, investing through a demat account, or in physical form in equities, bonds and debentures, in secondary markets or IPOs and most deposits made with companies, among others, require the bank account details to be provided at the time of application. In case of products such as the NPS, bank account details are optional for the tier I account but mandatory for the tier II account. Bank account details are not required for applying to the POSB products though there is an option in products such as the Monthly Income Scheme (MIS) to get the interest credited to a post office savings bank account.

Permanent Account Number (PAN): PAN has been notified as the single identification number for all capital market transactions. Barring some exempted small value transactions, it is compulsory for all categories of investors to quote PAN in the application form. Other financial products, such as fixed deposits with banks and post office and savings certificates, among others, also require the PAN card to be provided for investments over specified limits. The original PAN card is verified against a self-attested photocopy at the time of investment.

KYC Compliance: KYC completion status of the applicant must be provided in the application form, and proof of being KYC compliant also needs to be provided at the time of making the investment.

2.1.6 Investor Folio or Account

A folio number or account number, customer identity number or certificate number is allotted to the investor at the time of the initial purchase or investment or account opening. It is created by the investment product or service provider or their agent, such as the registrar and transfer agent, on receipt of a valid application. The information provided in the application form is captured to create a unique customer record. All transactions pertaining to the investment, financial or non-financial, are recorded under this. The identity number assigned to the investor must be quoted at the time of initiating any transaction pertaining to the investment. A certificate, passbook or account statement giving details of the number allotted, investment made and the investor information that is captured for the records is given to the investor.

Information of the investor used to create the account or folio includes name, status, contact details and bank account information if it is mandatory for the particular product or service. The mode of holding and operating the account, in case of joint holders, is also recorded. The nomination of persons entitled to receive the investment in the event of the death of the holders is also recorded. The folio or account conditions such as address, nature of holding and operating the account, bank account information and nomination apply to all investments held under it.

Some investment options such as the NPS, recurring deposits with banks and POS scheme and mutual fund schemes allow an investor to make additional investments in the same account over a period of time. The account number or folio number has to be quoted to enable this. In the case of mutual funds, investors have the choice of making subsequent investments in the same scheme or other schemes of the same service provider by quoting the existing folio number. The Unique Customer Identification Code (UCIC) recommended by the RBI to be used by banks and NBFCs for their customers also helps smoothening the process of establishing the investor's identity and address across different products and services of the institution.

Similarly, in the case of POS scheme products, an investor who has undergone the KYC process once to open an account or buy a savings certificate can just quote the existing account number or the certificate numbers in a new application at the same post office. The KYC verification need not be done again in such cases.

Investments made in an open-ended mutual fund scheme after the initial or first investment is called an additional investment. Additional investments can be made in a lump sum or they can be in the form of a systematic investment plan where the investor commits to investing a fixed sum of money at periodic intervals. Additional investments being made

under the same folio can be done using a transaction slip. Transaction slips are forms that can be used to carry out various transactions such as additional purchase, switch transactions, redemption and other such services in an existing folio. Transaction slips require minimum details to be filled in by unit holders. These details are name, folio number, scheme name and plan. Apart from this, the investor needs to fill in details with respect to the specific transaction that the investor wishes to carry out, and strike off the other fields. No further information of the investor needs to be provided. Proof of compliance with regulatory requirements of PAN and KYC also need not be provided separately. An application form can also be used to make an additional investment in the same folio by quoting the folio number.

Investors holding an NPS account can make periodic investments into their Tier 1 or Tier 2 account by quoting the Permanent Retirement Account Number (PRAN) allotted at the time of opening the account. Investors can hold only Tier I and Tier II account each in the NPS. Investors investing in the securities markets can consolidate all their investments into their demat account. Purchases and sales in the stock markets and mutual funds, investing in IPOs of shares and bonds can all be routed to the same account by quoting the demat account at the time of transaction.

2.2. PAN and KYC Process

2.2.1 Permanent Account Number (PAN)

Permanent Account Number (PAN) is an identification number issued by the Income Tax authorities. Form 49A issued under section 139A of the Income Tax Act, 1961 is the prescribed form to apply for a PAN. Proof of identity and proof of address must be provided while submitting the form. The Income Tax department has tied up with some organisations such as the Unit Trust of India (UTI) and National Securities Depository Limited (NSDL) who can accept Form 49A and verify the documents.

Section 114 B of the Income Tax Rules lists the transactions that mandatorily require the PAN to be quoted. Most financial market transactions require the PAN details to be provided for all categories of investors, including NRIs and guardians investing on behalf of minors. Some investments or financial transactions may not require the PAN card details for small ticket sizes, but for higher amounts it may have to be provided. These have been discussed earlier. Where the PAN card is mandatory, the original is verified against the attested copy at the time of making the investment. For such transactions, in the event that the PAN is not available, then a declaration in form 60/61 giving details of the transaction has to be provided.

For mutual fund transactions, the verification and attestation can be done at the distributor, broker or mutual fund's office, or by a bank manager or a gazetted official. The investor's

financial advisor can also attest the PAN card, if the advisor has complied with the Know Your Distributor (KYD) norms and registered as such, with Association of Mutual Funds in India (AMFI). There are a few exemptions to the requirement for PAN card in mutual fund transactions which are discussed later in this section. An attested copy of the PAN card is maintained by the Registrar and Transfer agent. Any subsequent transactions require the investor to mention the PAN. The PAN is then verified at the back-end from the investor records.

Similarly, other service and investment product providers maintain the records of PAN card verification conducted and use it for future transactions and investments of the investor.

Exemptions from PAN

There are certain mutual fund transactions which are exempt from the requirement for submitting PAN. These are micro investments, i.e. investments upto Rs. 50,000 in aggregate under all schemes of a fund house. The limit of Rs. 50,000 is reckoned on a rolling 12 month period or in a financial year.

Micro investments in mutual funds made by individual investors alone are exempt from PAN requirement. Hindu undivided families and non-individual investors are not eligible for this exemption. Investments in mutual funds exempt from the requirement of PAN may be made as a lump sum investment or through a systematic investment plan. Such investors must enclose a copy of the KYC acknowledgement letter quoting 'PAN Exempt KYC' Reference number obtained from the KYC Registration Agency along with the application form. Eligible investors must hold only one PAN Exempt KYC Reference number.

Cash investments not exceeding Rs. 50000 per mutual fund in a year is permitted for investors who may not have a PAN.

Opening a Basic Savings Bank Deposit Account (BSBDA) does not require a PAN card. Similarly, insurance premium payments in cash up to Rs. 50000 per transactions, cash contributions to the NPS account to the extent of Rs. 50000 do not require PAN details to be provided. The PAN card is not a prescribed proof of identity for investments in Post Office Savings Bank deposits, schemes and savings certificates by investors categorized as 'low risk' based on the value of the investment being made and the balance of all previous investments not exceeding Rs. 50000.

2.2.2 Know Your Customer Process

In order to ensure that illegal funds are not routed into Indian markets, the government has promulgated the Prevention of Money Laundering Act (PMLA). According to this Act, the identity of those entering into financial transactions must be known and verified. The procedure to do this is known as Know Your Customer (KYC) norms.

KYC norms apply for opening bank accounts, trading accounts, demat accounts, capital market investments, life and general insurance policies, investments in POSB products, fixed deposits, National Pension Scheme (NPS) and other such financial transactions.

The KYC process involves verification of proof of identity and proof of residence of the customer. Investor's identity has to be verified with a document carrying their photograph. Such identification can be a passport, driving license, voter's identity card, Aadhaar Card and the like. Proof of address can be verified from address as stated in the passport, ration card, voter's identity card, and latest utility bills. The KYC process also requires verification of the PAN card where available.

In person verification

The KYC procedures requires the intermediary with whom the client conducts the Know Your Customer formalities to do, an 'In Person Verification (IPV)' of the client. The name, designation, organisation, and signature of the person doing the verification have to be recorded in the form. The officials of the asset management company and the distributors who are compliant, with the KYD norms are eligible to conduct, the in person verification.

It is mandatory for all investors who wish to invest in mutual funds to complete KYC formalities with a KYC Registration Agency (KRA). The e-KYC services of the Unique Identification Authority of India (UIDAI) have also been recognized as valid process for KYC verification. The client will have to authorize the intermediary to access the identity and address data from the UIDAI system. Investors making micro investments must comply with the KYC requirement through a registered KRA or UIDAI. The exemption available to micro investments from providing PAN details will continue to apply for the KYC process. The investors will have to quote the 'PAN Exempt KYC Ref No.' in the application form.

At the time of making an investment, the investor needs to furnish a proof of being KYC compliant. This is the acknowledgment sent by the KYC Registration Agency or from the UIDAI in case of e-KYC.

Banks, depository participants, insurance companies, post office, brokers and other financial intermediaries conduct the KYC compliance process at the time of initiating a transaction with an investor. An authorized official of the intermediary conducts an in person verification of the applicant as part of the process. Banks categorize investors as low medium and high risk based on their financial implications of the relationship to the bank and the profile of the account holder(s). While a proper introduction from an existing account holder with the bank and verification of proof of address will suffice for the low risk category, medium and high risk categories have greater diligence exercised in establishing identity, address and source of funds. Periodic updation of records is also done with more frequent updation being done for the higher risk category investors. Insurance companies are permitted to use KYC compliance process conducted on an individual by a bank. The POS scheme also categorizes investors based on the risk perception, like banks, and the rigor of

the KYC process is higher for the higher risk categories. For the medium and high risk category, the PAN card or form 60/61 declaration is mandatory. For the high risk category, the source of funds invested has to be established.

Investors subscribing to the NPS will have the KYC process conducted by the Points of Presence Service Providers (POP-SP). Two sets of the proofs of identity and address along with a photo-identity are handed over to the POP-SP. After verification, the POP-SP retains one set while the other set is sent along with the account opening forms to the Central Recordkeeping Agency (CRA) of the NPS.

For general insurance products, KYC is prescribed at the time of settlement of claim where the claim payout exceeds one lakh per claim.

Uniform KYC Process for Securities Markets

Investors deal with multiple capital market intermediaries such as mutual funds, Depository Participants (DPs), stock brokers, portfolio managers, venture capital funds and others. Thus far, investors were required, to undergo, the KYC process at the time of initiating transactions with each intermediary. To eliminate this duplication, SEBI has mandated a uniform KYC procedure for compliance by clients from January 1, 2012. This means that an investor who has undergone a KYC procedure with any of the specified intermediaries can use the same to invest with a mutual fund and vice versa.

The new KYC form has two parts. Part one will have information to establish identity and address, common to all intermediaries. Additional information as required by each intermediary can be collected using part two of the KYC form.

SEBI has introduced the system of KYC Registration Agency (KRA) to enable this. Intermediaries covered under the uniform KYC norms include mutual funds, DPs, stock brokers, portfolio managers, venture capital funds and collective investment schemes.

The KRA is a centralized agency which maintains and makes available the information provided by a client to an intermediary to comply with the KYC norms. SEBI registered intermediaries are required to upload the KYC information onto the KRA system and dispatch the supporting documents to the KRA. The KRA will send a letter to the investor within 10 days of receipt of the same confirming the details. Subsequent account opening by the client with any other intermediary will just require the information to be downloaded from the KRA system and verified.

The following KRAs are registered with SEBI as of November 30, 2015: CDSL Ventures Limited (CVL), NSDL Database Management Limited (NDML), DotEx International Limited (DotEx), CAMS Investor Services Private Limited and Karvy Data Management Services Limited.

2.3. Dematerialisation and Re-materialisation of Securities

A depository is an institution that offers the service of holding the securities of the investors in electronic form. Its services can be compared to that of a bank which holds the depositors' funds and facilitates the conduct of fund related transactions. Similarly, a depository allows the investors to hold their securities in electronic rather than physical form and provides services related to transaction in securities.

The Depositories Act was passed in 1996 which allow companies and investors to issue, hold and transact in securities through a depository. There are currently two depositories operational in India, National Securities Depository Ltd. (NSDL) & Central Depository Services (I) Ltd. (CDSL). The securities can be dematerialised at the time of issue or subsequently. SEBI Regulations requires all public issues whose size is in excess of Rs. 10 crores to be issued only in dematerialised form. Investors in mutual funds can either ask for a demat issuance of units, or convert their holdings into demat mode. However, they are free to hold them in physical form. Companies are required to apply to a depository for dematerialising their securities. The executive committee of the depository evaluates the eligibility of the securities for admission.

Under the SEBI (Depository and Participants) Regulations of 1996 the categories of securities eligible for dematerialisation are:

- Shares, scrips, stocks, bonds, debentures, debenture stock or other marketable security of any incorporated company or other body corporate.
- Units of a mutual fund, rights under a collective investment scheme, venture capital funds, certificates of deposit, commercial paper, money market instruments, government securities and unlisted securities.

As per the Depositories Act, 1996, the physical securities that are dematerialised are required to be destroyed by the R&T agent and a credit entry is made in the electronic records of the depository. The dematerialised securities are fungible. This means that once a share is dematerialised, it does not have a distinctive identity in terms of share certificate number or distinctive numbers or folio numbers.

The investor's ownership of the security is described in terms of number of shares held. In the depository, the dematerialised securities are identified in terms of the ISIN[3] (International Securities Identification Number) and the number of shares.

2.3.1 Dematerialisation

Dematerialisation is the process of converting physical securities into electronic form. It involves the investor, the DP, the issuer/R&T agent and the depository.

[3]The ISIN is a 12-character long identification code. It has three components - a pre-fix, a basic number and a check digit. Securities issued by the same company, issued at different times or carrying different rights, terms and conditions are considered different securities for the purpose of allocating ISIN and are allotted distinct ISINs.

The steps in this are:

- Investor hands over the securities to be dematerialised along with the Dematerialisation Request Form (DRF) to the DP.
- The DP sends the request through the electronic system to the issuer/R&T agent and the depository. The Dematerialisation Request Number (DRN) that is generated by the system is entered on the DRF and sent along with the physical documents and a standard covering letter to the R&T agent.
- The certificates received by the R&T agent will be mutilated and have the words 'Surrendered for Dematerialisation" on it.

The R&T agent has to verify that:

- The DRF has the DP's authorization
- The dematerialisation request has been received in electronic as well as physical form.
- The DRN in the physical documents matches with the DRN in the electronic request.
- The certificates have the distinguishing marks such as hologram/water mark.
- The mutual fund account statements have all the complete details and match with ISIN provided in the demat form.

The R&T agent will verify the physical documents with the details in the covering letter and DRF and forward the documents for dematerialisation. The process of giving effect to dematerialisation by the R&T agent is similar to that of transfer of registered ownership. The data to be captured, reports to be generated, documents to be filed are similar. In the Register of Members (RoM) of the company, the depository's name is included in the place of the investor to the extent of securities dematerialised. However, no stamp duty is payable on dematerialisation unlike other transfer of ownership transactions. Once the RoM of the company is amended, confirmation is sent to the depository and the investor's account with the DP is credited with the number of dematerialised shares.

A dematerialisation request may be fully or partially rejected for the following reasons:

- Mismatch in the information between the DRF and physical certificates.
- Certificates are fake, stolen or for which duplicates have been issued.
- Securities stand in a different name(s) from that mentioned in the DRF.
- The Securities do not pertain to the issuer/R&T agent.
- Signature of the holders does not tally with the records of the R&T agent.
- Delay of more than 15 days in the receipt of physical securities from the day of electronic request.

The R&T agent mutilates the physical certificates once the process of dematerialisation is complete. The details of the certificate destroyed are entered into the Register of Destroyed Certificates. The account number of the beneficial owner is entered into the holding master maintained by the R&T agent for future reference.

For dematerialisation at the time of an IPO, the following steps have to be followed:

- The Company, R&T agent and the depository enter into an agreement for admission of securities in the depository.
- The depository assigns an ISIN for the security.
- The allotment advice for demat shares will have the client account number, DP id and depository details.
- For the demat shares, the depository will be entered as the registered holder in the register of members of the company and the details of the corresponding beneficial owners will be uploaded in the depository's system.
- The issuing company or the R&T agent may also maintain the details of the beneficial owners.

The DRFs are required to be stored for at least a period of 5 years.

2.3.2 Rematerialisation of Securities

Rematerialisation of securities is the process of converting the electronic holding of a security to physical form.

The steps involved in this process are:

- Investor submits a Rematerialisation Request Form (RRF) to the DP.
- The DP validates the signature and the availability of the shares in free form in the investor's account.
- The request is then electronically forwarded to the depository.
- The RRF will have details such as the name(s) of the holder(s), signature, Number of shares to be rematerialized, address, bank account details, PAN Number, age, tax status and nominees, if any.
- The depository validates the information and forwards an electronic request through the depository system to R&T. This can also be viewed by the DP.
- The DP sends the RRF to the Issuer/R&T agent who cross verifies it with the electronic confirmation received from the depository and forwards it for processing.
- Acknowledgement of this is sent to the DP.

- The R&T agent will capture the information in the RRF and create a new folio or add to an existing folio. The procedure to be followed is the same as that for creating a folio in other circumstances.
- The R&T agent will assign a new certificate number and distinctive numbers from the set of shares already dematerialised.
- The names of the beneficial owners will be included in the Register of members of the company and the name of the depository removed to that extent.
- In the records of the depository, the investor's account will show a reduction to the extent of rematerialization.
- The R&T agent shall ensure that the applicable revenue stamps are affixed.
- The R&T agent will print certificates in the name of the investor and dispatch them directly to the shareholder.
- Confirmation of the rematerialization will be electronically sent to the depository and the DP will be informed of the same.

2.4. Power of Attorney

Individual investors can empower someone they trust to do transactions on their behalf, by granting and executing a Power of Attorney (PoA). This facility is generally used by non-resident investors who stay in a foreign country and are thus unable to manage their financial transactions, or by investors who like their brokers or advisors to manage their investments on their behalf.

A Power of Attorney has two parties: the grantor, who is the primary investor or account holder and grants the rights; and the Attorney, or holder, who is authorised to execute an agreed set of actions on behalf of the grantor. The grantor and the holder have to abide by the guidelines for PAN and KYC compliance. Power of attorney holders usually exercise all the rights of an investor. They can do normal transactions such as purchase, payment for purchase, sale, settlement of transactions and redemptions. The rights of the holder depend on what the grantor is willing to delegate under the power of attorney and what is allowed for PoA transactions by the investment or service provider. However, the attorney cannot appoint a nominee for the investment. The grantor of power of attorney can continue to operate the account even after giving a power of attorney.

To be valid the PoA must be:

- Typed on a non-judicial stamp paper.
- Stamped according to the rules applicable in the state in which it is executed.
- Signed by the grantor on all pages.
- Signed by the grantor and the holder of the power of attorney on the last page.

- Notarised by a notary public. This requirement varies among different product producers and intermediaries. For example, some mutual funds may require the PoA to be notarized, while a PoA to operate a demat account needs to notarized only if the depository participant so requires.

If the Power of Attorney is executed abroad, it can be typed on a plain paper, attested by a designated official of the Indian embassy abroad or by a notary abroad, signed on all pages by the grantor and sent to India for the holder of the power of attorney to sign on the last page. It is then stamped and notarized in India, if required.

Since minors cannot enter into valid contracts, there can be no PoA for a minor's transactions. The guardian plays a role similar to a PoA holder acting on behalf of the minor.

A certified copy of Power of Attorney, with signatures of both the parties has to be submitted to the entity where the PoA will be exercised. A PoA holder cannot open or close a bank or a demat account. The signatures of the holders of the account are necessary for this. The holder of the PoA can operate the account on the basis of the rights granted. In case of investments such as mutual funds, POS schemes, the PoA holder can make the initial investments and subsequent purchases and operate the account on behalf of the grantor. The grantor's signature is also recorded in the folio for purposes of verification. Typically, the grantor of the PoA can also conduct the transactions for which the PoA has been granted. A PoA holder cannot make or change nominations in an account or investment.

2.4.1 General Power of Attorney

A General Power of Attorney gives the agent the authority to handle all the affairs during a period of time when the investor is unable to do so, such as when he is travelling out of the country or when his physical and/or mental health are compromised.A General Power of Attorney is typically very broad, giving the agent extensive powers and responsibilities. General Power of Attorney typically includes (but is not limited to):

- Handling banking and other transactions
- Filing tax returns
- Buying, selling, or managing real estate and other property
- Entering contracts
- Settling claims

2.4.2 Specific Limited Power of Attorney

A Specific Power of Attorney gives the agent the authority to conduct a specific act or acts on the investor. Because this type of Power of Attorney is limited to the act or acts designated in the document, it is especially important to be very clear about the powers one wishes to give to the agent.

One may use a Special Power of Attorney to appoint an agent to act on his behalf in the event that if he become ill or disabled, are embarking on extended travel, or are otherwise unable to handle a specific type of task. He may designate any of the powers listed above (under General POA) to the agent, or any other powers he deem necessary.

2.5. Account Opening Process for Non-Residents

An Indian citizen or a person of Indian origin who is residing outside India is called Non-Resident Indian (NRI). A resident is an Indian citizen, who has stayed in India for at least 182 days in a financial year. NRI status is awarded based on number of days of residence in India in a financial year.

An NRI under Indian Income Tax Act is defined as a Person of Indian Origin (PIO) if he or she:

- Has held an Indian passport at any time, or
- Is a grandchild of citizens of India, or
- Is a spouse of an Indian citizen, or
- Is a spouse of a person covered under the first two points above

NRI investors, including Persons of Indian Origin and QFIs, are allowed to invest in India. The key issue in NRI investment pertains to repatriation of investment proceeds on sale or redemption of units. Repatriation norms vary depending upon the source of the funds from which the original investment was made. NRIs can earn income in rupees from India, or in foreign currency from another country. If the source of funds for an NRI investment is foreign currency, it can be freely taken outside the country; that is, it is repatriable. If the source of funds is Indian Rupees, it is non-repatriable. Investment made from these two sources of income cannot be clubbed together.

The reason for the rupee investment proceeds being non-repatriable is that since the rupee is not fully convertible on capital account, RBI norms do not permit investment in Indian rupees to be freely converted to other world currencies and to be taken out in foreign currency.

Since the treatment of investment proceeds from NRI investment depends on the source of funds, the source has to be identified at the time of making the investment. The bank account through which the investment is routed is used to determine the source of funds. The funds that are remitted from abroad into the Non Resident External (NRE) Account or Foreign Currency Non Resident (FCNR) Account and invested can be freely repatriated back. NRI investors have to give a declaration in the application form about the type of account from which the investment was made and indicate whether it is on a repatriation basis. The rules and regulations pertaining to repatriation can be modified by the Reserve Bank of India. If investments are made from Non-Resident Ordinary (NRO) account, proceeds are

repatriable only to the extent of USD 1 Million per financial year. If made from NRE account, FCNR account, or through a draft drawn on a foreign bank and supported by Foreign Inward Remittance Certificate (FIRC), then the proceeds are repatriable without any limit.

All incomes earned in India on investments are freely repatriable, irrespective of the source of funds used to make the investments, provided taxes as per Indian laws have been paid. Such income may include interest on bonds and bank accounts, rental income, dividends from shares and mutual funds. Income in the form of sale proceeds of capital assets such as property, land, shares, bonds, mutual funds held in India are repatriable to the extent of funds remitted from abroad for buying those capital assets.

KYC for NRIs

NRIs have to be KYC compliant in order to make investments in India. A soft copy of the KYC form is widely available at the websites of mutual funds, brokers, service providers and KRAs. It has to be completed and submitted along with the necessary documents to a point of service (PoS) in person, or mailed to the KRA agency directly.

The following is the additional documentation, apart from proof of identity, proof of address and PAN card, for NRIs and PIOs:

- Certified True Copy of Passport
- Certified True Copy of the Overseas address
- Permanent address
- A certified true copy of the PIO Card (for PIOs)
- In case of Merchant Navy NRIs, Mariner's declaration or certified copy of CDC (Continuous Discharge Certificate) is to be submitted.

All documents must be submitted in English and can be attested by the Consulate office or overseas branches of scheduled commercial banks registered in India.

KYC Procedure for Qualified Foreign Investor (QFI)

A person eligible to invest as a QFI has to undergo the KYC process with any of the designated qualified DPs listed by SEBI. The qualified DPs have been mandated to conduct the KYC before opening a demat account as QFI. The KYC procedure involves establishing proof of identity and address by providing the following documents

- Form 49 AA
- Passport, PIO card or OCI card, as applicable
- Photograph
- Document to establish proof of identity (passport, PAN card, driving licence, identity card issued by authorized entities)

- Documents to establish proof of address (Passport, Voter ID card, driving license, sale or lease deed of residence, utilities bill)

The documents have to be self-attested and the originals have to be provided for verification. If the originals are not produced for verification then the copies should be attested by entities duly authorized to attest documents such as a notary public, court magistrate, judge, officials of overseas branches of scheduled commercial bank, authorities at the Indian embassy/consulate office. In Person Verification (IPV) has to be done by the employees in the overseas office of the intermediary. If that is unfeasible, attestation of the documents by a notary public, court, magistrate, authorized officials of overseas branches of scheduled commercial banks registered in India, authorized embassy official may be permitted.

Portfolio Investment (NRI) Scheme (PINS) Account

The Portfolio Investment (NRI) Scheme (PINS) is a scheme of the Reserve Bank of India (RBI) and is mandatory for Non Resident Indians (NRIs) and Persons of Indian Origin (PIOs) who like to purchase and sell shares and convertible debentures of Indian companies on a recognised stock exchange in India. All purchase and sale transactions in listed securities of NRIs is routed through their PINS account held with a designated bank, which maintains and reports to RBI as required, the investments made by NRIs.

Only an NRI/PIO can open a PINS account. PINS account with the bank is identical to the NRE account. However, even if the NRI has an existing NRE account, he must open a separate PINS account for the purpose of trading in shares. An NRI/PIO can have only one PINS account (One NRE (PIS) account for investment on repatriation basis and one NRO (PIS) account for investment on non-repatriation basis) at a given point of time.

PINS account can be opened only in designated branches of banks (authorised dealers) as authorised by RBI under the Portfolio Investment Scheme. Addresses of designated branches are usually available on the bank's website.

Application for PINS permission can be made through the bank by filling the PINS application form. Details of all shares purchased through the primary market need to be enclosed. Along with PINS account, PINS demat account opening form also needs to be enclosed.

Documents Required

Copy of current passport, valid work permit or employment visa, PIO card (if applicable) and address proof need to be enclosed with the application. The application form with required documents needs to be submitted at the designated branch.

Seafarers employed by foreign shipping companies can open a PINS account by submission of required documents such as Continuous Discharge Certificate.

Permitted credits to the NRE (PIS) account for routing PIS transactions include foreign inward remittance by way of Telegraphic Transfer, Demand Draft, cheque, traveller's

cheque, foreign currency or transfer from existing NRE or FCNR accounts as well as dividends from shares or mutual funds or sale proceeds of shares/mutual funds acquired on repatriation basis. Debits to the account includes outward remittance of income or dividend earned, amounts paid for purchase of securities and charges applicable for acquiring these securities.

Credits to the NRO (PIS) account will include inward remittance of foreign exchange, dividends and income earned under the PIS, net sale proceeds and transfer from other NRO, NRE of FCNR (B) accounts. Debit to the account will be in the form of outward remittance of income or dividend earned, amounts paid for purchase of securities and charges applicable for acquiring these securities.

NRIs cannot purchase more than 5% of the paid-up capital of a company on both repatriation and non-repatriation basis subject to an overall limit of 10% by all NRIs. The purchase of debentures of each series of an Indian company shall not exceed 5% for each individual within an overall limit of 10% for all NRIs.

NRI Demat account

NRIs can open a demat account with any Depository Participant in India. NRI's needs to mention the type ('NRI' as compared to 'Resident') and the sub-type ('Repatriable' or 'Non-Repatriable') in the account opening form.

No permission is required from RBI to open a demat account. Holding securities in demat only constitutes change in form and does not need any special permission.

NRI must open separate demat accounts for holding 'repatriable' and 'non-repatriable' securities.

NRIs can hold joint demat accounts. For the purpose of determining ownership of holding, the first holder is taken into account. Hence, even though other joint holders may be person residing in India, the sale proceeds of such securities can be repatriated in case the first holder is permitted to repatriate funds.

NRI Trading account

NRI investors can open a trading account with a registered broker of a stock exchange. NRIs can have two separate trading accounts linked to NRE & NRO accounts.

Special considerations in case of NRI trading accounts:

- NRIs cannot trade in securities which are in the RBI ban list once the shareholding by NRIs/FIIs in a company reaches the overall ceiling
- Clear funds should be available for purchases
- Securities should be available before making a sell order

- Depending upon whether the purchases are made on repatriation / non-repatriation basis pay-out of the securities is transferred to the respective demat account.
- Purchase/Sale transactions in cash segment are settled by delivery only
- The contract notes in original has to be submitted to the designated branch where the investor holds the PIS account within the time specified

2.6. Maintenance of Investments

Investor accounts and folios require maintenance for changes to the details provided at the time of opening an account. Investor information such as contact address and bank account details are provided in the application form which is used to allot a unique identification number to the investor. Request for changes to static or personal information in the folio or account have to be intimated to the investment company or service provider or their agent, such as the registrar and transfer agent, to update the investor records. Documents that prove the change also needs to be furnished along with the request. All joint holders need to sign such change requests in order to be valid.

Once the request is received, the supporting documents are verified and necessary changes are made to the investor records. An intimation of the updation or statement of account showing the change as a transaction is sent to the investor.

2.6.1 Change of Address and Contact Details

The KYC process that has to be undertaken by each investor or account holder in a financial transaction establishes the identity and address of the investor. The proof and record of the identity and address of an investor are maintained with the entity that conducted the KYC process, such as the KYC registration agency (KRA) in case of capital market transactions or the concerned bank or insurance company or other product provider as the case may be. Hence, any change to these details must be carried out in the KYC records. In case of capital market transactions, such as investment in mutual funds, opening a demat or broking account, investing in a portfolio management scheme, venture capital fund or other collective investment schemes, the uniform KYC process is done through the KRA. The KYC details change form can be used to carry out such changes. The form should also be accompanied by a documentary proof of the new address, such as passport, current utilities bill and other approved address proof documents. The KRA will update the records and communicate the change of address to all the entities with which the investor has holdings.

Only intimation to the Asset Management Company, Registrar and Transfer Agent, DP, Broker or PMS provider about change of address will not be sufficient unless the change has been carried out in the KYC records available with the KRA.

In case of other financial products and services, the change in address has to be intimated to the provider for updation in the records. Banks follow a system of periodic updation of account holder records. In case of POSB accounts and savings certificates, a change of address may involve a transfer request to a new post office in which case documents to establish the new address has to be provided at new the post office. If encashment of certificate is requested at a post office other than the one at which it was purchased, the present address is verified before the payment is made.

Investors in the NPS have to use form S2 prescribed by the CRA to record the change in address in their account. Insurance policy holders need to inform the insurance company of the change in address. In all cases of change of address it is essential to provide self-attested documentary proof of the new address such as passport, current utilities bill, and ration card.

2.6.2 Change in Name

Investors may request a change of name in their investment records or folio. For instance, women investors may like to change their maiden name to married name. The letter requesting the change in name should be supported by the name change certificate issued by a regulatory authority, an official gazette copy announcing the new name and a copy of marriage certificate, if applicable. There may be a form specified for this purpose, such as the form S2 prescribed by the NPS or the KYC details change form specified by KRAs or a form specified by the concerned bank, insurance company or other intermediaries, to request a change in name.

2.6.3 Change in Status

Investors who undergo a change in status from resident to non-resident or vice versa have to inform the change of status to the investment companies and financial service providers. This is because a change in status will imply a change in the type of bank accounts from which payments can be made and received, a change in the tax implications of investments and a change in the address recorded under the KYC process.

A change in status can be recorded with the capital market companies and intermediaries by using the KYC details change form to register these changes in the records of the KRA. The change will be intimated to all the capital market participants with whom the investor has transactions. Insurance companies have to be intimated of the change and the new address and mode of premium payment details provided in an NRI questionnaire that is prescribed by the company. Bank accounts held as resident should be re-designated to NRO account through an application signed by all the holders. If there is a change of address, then the new address should be provided supported with documentary proof. If a trading account is linked to the account, then it should be delinked.

A new demat account and trading account will be opened which will reflect the NRI status of the investor and will be linked to the NRO/NRE bank account. All securities held in the resident demat account will be transferred into this new account and will be non-repatriable.

New bank account details have to be provided to all investment providers such as asset management companies, depository participants and brokers. Existing investments in small savings schemes can continue and maturity values will be credited to the NRO account of the investor.

Similarly, a change in status from NRI to resident has to be intimated and necessary action taken to reflect the changed status.

2.6.4 Marking a Lien

Investors may pledge their investments such as shares and bonds, mutual fund units, bank deposits, small savings schemes and others as collateral to borrow money from scheduled banks, financial institutions, or non-banking finance companies (NBFCs). A loan can also be taken against a life insurance policy by assigning the policy to the lender or to the insurance company itself if the loan is taken from the company. The lender will create a lien or charge on the securities pledged with them. The investor cannot redeem the securities under lien. If they fail to pay the loan amount the lender can sell the securities and recover their dues.

The investor and the lender must inform the investment provider, such as the mutual fund, bank, insurance company, depository participant or insurance company of the lien through a letter. In some cases, such as assignment in an insurance policy or for savings certificates, there may be a specified form for the purpose. Typically the information that requires to be provided in creating a charge includes:

- The folio number, account number, certificate number, FDR number, demat account number, insurance policy details of the investments offered as security.
- The scheme / plan / option if applicable
- The number of units/securities pledged with ISIN as applicable
- The details of the bank account of the financier or lien holder.
- The demat account details of the lien holder or pledgee if shares in a demat account are being pledged.

The lien or pledge is recorded by the investment or service provider in the investor records. In case of mutual funds, the R&T agent records the lien against the securities and informs the investor of the lien through the account statement. The lien appears as a transaction in the account statement. Lien can be for all or part of the securities in a folio.

An investor cannot redeem or transfer the securities under lien until the lien holder provides a written authorisation to revoke the lien or pledge. The investor can conduct transactions such as change in address or bank details, unless specifically denied by the lien holder. Once the investor repays the loan, the securities become free from lien and are unmarked. For unmarking of lien, the lien holder should send a written communication to the company. If the request for unmarking is sent by the pledger or the holder of the investments, then the application must also be signed by the pledgee or the lender. Dividends and other benefits from the securities under lien will go to the investor unless specifically barred by the lien holder.

As long as securities are under lien, the lien holder can exercise or invoke the lien. Invoking the lien means redeeming or selling the pledged securities. The lien holder receives the proceeds by selling/redeeming the securities. There is no transfer of securities from the investor to the lien holder. The investor receives information about lien invocation through the account statement. If the lien or charge is created on a bank fixed deposit, then the bank will undertake to pay the amount of FDR to the lien holder in the event they exercise the lien. Similarly, any payouts by the insurance company on a policy that has been assigned, will go to the assignee till the loan is repaid and the insurance company is so intimated.

2.6.5 Transmission

Transmission means 'an act of passing on something'. In the context of investments it refers to passing on the investments on the death of the investor to another person. To complete a transmission process, on receiving a claim with documents to support it, the name of the investor is removed from investment records and the investment is transferred to persons entitled to receive them.

After the death of a person there may be several claimants to the investments made by the deceased security holder. The investment provider or their agent such as an R&T agent of a mutual fund, do not take responsibility for the equitable distribution of the investments among the heirs of the deceased investor. They follow the directions of the original investor or follow a prescribed process if there is no such instruction. There could be joint holders, nominees, legal heirs and other claimants. The eligibility of claimants to get the investments transmitted in their name on the death of the first holder will depend upon the way the investment account was held. Broadly, the process followed in transmission of investments may be as under:

- If the investment account was held jointly and did not have nominations, then the investments are transmitted to the joint holders in the same order. The second holder will now become the first holder of the investments. In case of a bank account or fixed deposit, the account balance may be paid jointly to the heir of the deceased and the

surviving holder. In the event the mode of operation of the account was specified as either or survivor, then it is passed on to the remaining holders.

- If the folio was held jointly and had nominations, the right of the joint holders to transmission supersedes the right of the nominee.
- If the investment account was held singly (only one holder) and had a nomination, then the investments will be transmitted to the nominee.
- If the investment account was held singly and there was no nomination, then it would be transmitted to legal heirs or other claimants where there are documents to establish succession.
- On the death of Karta of HUF, the investment will be transmitted to the new Karta on receipt of indemnity bond signed by all the remaining co-parceners.

Companies take a sensitive approach to dealing with transmission cases. They explain the documentation correctly and completely to the claimants. In cases where the amount involved is not large, some of the requirements may also be waived. For example DPs may not insist on documents such as a succession certificate or the probate or letter of administration, if the application for transmission is for securities whose value does not exceed Rs. 50,000. A copy of the death certificate, letter of indemnity and NOC from other legal heir is seen as adequate to process the transmission request. .

The transmission of investments to the claimant is done on the assumption that if there is a dispute, the person holding the investment or redemption proceeds is only holding it in trust, pending final settlement. Payment to the nominee or claimant as per the processes, absolves the investment entity of its responsibilities.

A request for transmission has to be made in the format, prescribed by the mutual fund, bank, depository or other investment provider as the case may be. The claimant may be required to sign an indemnity bond, indemnifying the bank, depository or AMC or others from any losses or disputes that may arise later. There are specific documents that support a transmission request. Documents submitted with a transmission request will have to be attested or notarised, and also verified with the originals. The following are the documents required for transmission depending upon the nature of the transmission request.

- Death certificate has to be provided as evidence of death in all requests for transmission.
- Probate of will to evidence validation of the will by the court as the last and final will of the deceased investor. However, it may be noted that probate is not always needed in all parts of India.
- In the event of death without a will, the legal heirs obtain a succession certificate from court. This certificate gives details of persons who are ‘succeeding’ the deceased.

- Documents establishing relationship with the deceased investor, such as birth certificate and marriage certificate, may have to be provided.
- An indemnity Bond may be required for absolving the company from any future claims that may be made by other claimants, after the transmission is made.
- No Objection Certificate (NoC) signed by the remaining legal heirs if the claim for transmission is made by one of them.
- Bank account details of the new first holder supported by cancelled cheque bearing account holder's name and account details
- KYC compliance documents of the person in whose name the investments are being transmitted.

2.7. Change in Status of Special Investor Categories

Minors, NRIs and investors investing through a constituted attorney constitute a special category of individual investors. Some of these investors do not make investments directly instead investments are made by designated entities on their behalf. These categories of individual investors require additional documentation and process, due to their differential status with respect to taxation and mode of operation of investments or restrictions on certain components of investment activity.

2.7.1 Minors as Investors

Minors are investors who are less than 18 years of age on the date of investment. Minors cannot enter into contracts on their own and if they, then such contracts are null and void by law. Therefore, the financial transactions of minors are conducted by adults on their behalf. Those transacting on behalf of the minor child are called guardians. Parents are the natural guardians of their minor children. If the application form identifies the status of the investor as a minor, then the date of birth of the minor investor becomes mandatory information that has to be provided along details of the guardian.

When investments are made on behalf of minors some additional documents need to be submitted with the application form. These include:

- The date of birth and proof of the same
- Document to establish the relationship of the guardian with the minor
- The PAN of the guardian who is investing on behalf of a minor

An investment on behalf of a minor cannot have joint holders. Thus investments can be held solely by the minor or jointly with the guardians, as allowed by the terms of the investment product. Minors have to be sole holders or first holders of the investment. Guardians have to provide all details and complete the Know Your Customer (KYC) formalities, as if they

were investing themselves. Guardians also sign the application and payment instruments on behalf of minors.

Minors may have a PAN card obtained by their guardian on their behalf. Depending on the requirements of the investment product, the PAN of the minor or of the guardian or both may have to be provided while making the investment.

The guardian of a minor may change due to demise of the existing guardian, or through mutual consent. When there is a change in guardian, an application has to be made for registration of the new guardian. For this the new guardian has to send a request letter to the company along with prescribed documents. If the existing guardian is alive, a no objection letter or consent letter from existing guardian or a court order appointing the new guardian needs to be submitted. If the previous guardian is deceased, a copy of the death certificate, duly notarized or attested has to be submitted. Attestation may be done by a special executive magistrate or an authorized official of the Company, or manager of a scheduled bank.

The new guardian could be a natural guardian (mother or father), or a court appointed legal guardian. A court appointed legal guardian has to submit supporting documentary evidence. A natural guardian also has to submit documentation evidencing the relationship. The signature of the new guardian in the bank account of the minor attested by the bank as such needs to be submitted. The new guardian also needs to obtain KYC compliance and furnish evidence of the same to the asset management company.

A petition can be filed in the High Court under the Guardians and Wards Act, 1890, or the Hindu Minority and Guardianship Act, 1956, by a person seeking to be a child's guardian, for being appointed as the legal guardian.

2.7.2 Minor turned Major

Once the minor become major, financial transactions are disallowed in their account. No debits or redemptions can be made in bank accounts; mutual funds folios or demat account of minors-turned-major. Minors are not eligible to sign documents, enter into contracts, or issue third party cheques. However, after a minor becomes major, they can conduct such transactions, only after their signature is attested by their banker.

KYC: Minors attaining majority will have to complete all the KYC process by submitting proof of identity and address. Banks and depositories may also insist on personal verification of the minor-turned-major. It is important to plan for such verification if the child is away at a different location for higher studies.

Bank Accounts: Holding details for minor's investments will undergo change so that the account is operable by the minor-turned major. Banks will ask for proof of age and ask for an application to attest the signature of the minor-turned-major.

PAN Card: The PAN issued to a minor will have to be resubmitted to the Income Tax authorities, for issuance of a new card, with the same number, but the new signature of the minor-turned-major.

Demat Account: Since demat accounts of minors can be held only on single-name basis, the account opening process has to be redone for a minor-turned-major. This involves opening of a new demat account. Securities held in the old demat account with minor status are transferred to the new demat account. Depositories may waive transaction charges on such transfers.

Mutual Fund Investments: In case of mutual fund investments, notification to the registrars, with a copy of the banker's attestation of the signature is adequate. R&T agents make the change in status, register the new signature and notify the investor. Minors can then operate the folio or investment account and the guardian will not have any rights to the mutual fund folio or demat account after this change has taken effect.

Systematic Transactions (SIP, SWP, STP and others): Standing instructions like Systematic Investment Plans (SIP), Systematic Withdrawal Plans (SWP), Systematic Transfer Plans (STP) are registered in a minor folio only till the date of the minor attaining majority, even though the instructions may be for an extended period. When the minor is approaching the age of majority, AMCs usually send letters advising the guardian and the minor to submit the form along with prescribed documents to change the status of the account/folio to "major". All SIP, STP, SWP and any other standing instruction registered in the minor's account are suspended if the documents are not received by the date when the minor attains majority. The folio is frozen for operation by the guardian on the day the minor attains the age of majority and no transactions shall be permitted till the documents related to minor turned major are received.

2.7.3 NRI to Resident Indian (RI)

If a person returns to India and forgoes the NRI status, he needs to carry out certain procedures with respect to his investments and bank accounts.

Bank Account: Once an NRI becomes a RI, he cannot operate his NRO/NRE/FCNR (B) accounts. He needs to inform to the bank about the change of status to resident Indian and needs to open a Resident Rupee Account. Account opening documents such as address proof, identity proof, photographs need to be submitted. A Resident Foreign Currency (RFC) account may be opened by a returning Indian to transfer balances from NRE /FCNR (B) accounts. This account can hold foreign currency and continue to receive funds in foreign currency from investments abroad.

Demat Account: Just like bank account, the returning NRI needs to inform change of status to the designated authorised dealer branch through which the investor had made

investments in the Portfolio Investment Scheme, as well as the DP with whom he has opened a demat account. A new demat account with 'Resident' status needs to be opened. All the balances held in the NRI demat account shall be transferred to the new 'Resident' demat account. After transfer, the NRI demat account will get closed.

Trading Account: If the NRI was operating an online trading account, the broker also needs to be informed about the change. The trading account with NRI status will get closed and a new trading account with resident status needs to be opened.

Mutual Fund Investments: Respective AMC with whom the NRI holds mutual fund investments needs to be informed about the status change. KYC change form needs to be sent to the KYC registration agency for change of status, address and bank details. An acknowledgement shall be issued by the KYC registration agency on submission of request and will carry out the necessary changes in its records.

2.7.4 Resident Indian to NRI

Different rules apply for a Resident Indian when his status changes to a Non Resident Indian. On becoming an NRI, a person needs to carry out certain formalities with respect to his existing investments and bank accounts.

Bank Account: Once a person changes his status from Resident Indian to NRI, he can no longer operate his Resident savings account. He needs to open a Non Resident External (NRE)/ Non Resident Ordinary (NRO) account with the Bank. Investments can be routed only through NRE/NRO account. Bank fixed deposits should also be converted to NRO fixed deposits and the original fixed deposit receipt has to be submitted and a new deposit confirmation advice with the applicable terms and conditions will be issued.

Demat Account: A person may be holding securities in a demat account in the Resident status. On becoming NRI, a new depository account with NRI status needs to be opened. All the balances held in account with 'Resident' status should be transferred to the new account. Securites held under this account will be treated on non-repatriable basis.

In case of physical securities held by the resident investor, a NRI needs to regularise his holdings to reflect NRI status. For this, NRI must submit a letter addressed to the issuing company along with the Demat Request Form stating change of status and giving details of foreign address.

Trading Account: On becoming NRI, a new trading account needs to be opened for future investments. NRI trading accounts usually have higher brokerage rates compared to resident investors. NRI can continue to hold the securities that were purchased as a resident Indian, even after he becomes a non resident Indian, on a non-repatriable basis.

Mutual Fund Investments: The NRI needs to inform the relevant AMCs about the change of status, change of address and bank details with respect to mutual fund investments. KYC change form needs to be sent to the KYC registration agency for change of status, address and bank details. An acknowledgement shall be issued by the KYC registration agency on submission of request and will carry out the necessary changes in its records. Once the investor is flagged as an NRI, TDS will be deducted at source on gains made on sale/redemption of mutual fund investments by NRIs as applicable.

2.8. Other Operational Aspects

2.8.1 Joint Holding

An investment may be held jointly by up to a maximum of three holders. The investment records are created in the name of the first holder and all the benefits of the investment such as dividends, interest and redemption proceeds are made to the first holder's account. All the joint holders must sign the application and comply with the requirements of PAN and KYC norms. The mode of operating the account may be single, joint or anyone or survivor. Any change to the mode of operation, or addition or deletion of joint holders can be done only with the signatures of all holders. In case of a demat account, addition or deletion of holders is not allowed once the account is opened.

In case of mutual fund investments and other investments in the capital markets the payment for the investment has to be made through the first holder's bank account.

If a folio is operated as 'Joint', all transactions will need the signature of all the holders. No one holder can modify the nomination, make redemption or take a loan against the investment. All transactions will need the signatures of all holders.

Some investment products allow for transposition, where with the consent of all joint holders, the positions of the first and other holders can be modified. Multiple demat accounts held in various combinations of the same names, may be difficult to operate. Instead, the Joint holders holding securities held in physical form may be able to consolidate their holdings by making a request for transposition of the names in the order in which the demat account has been opened and then dematerialise the securities using the transposition-cum-dematerialisation facility.

Investors can consolidate their holdings under several folios, broking accounts or demat accounts into one target folio or account. Folios that are sought to be consolidated must be identical in terms of unit holders' names and addresses, mode and order of unit holding, tax status and nomination. Investor can make changes in the folios to match the target folio and then seek consolidation. The folio conditions in the target folio will prevail after consolidation.

2.8.2 Nomination

Nomination is a facility provided to the holder of an investment to designate the person(s) who will be entitled to receive the benefits of the investments, in the event of the death of the investor. The investor can make the nomination either at the time of making the investment or subsequently. A nomination made in a folio or account will apply for all the investments held under it. While a demat account can have only one nominee, mutual funds, insurance policies, NPS, Post office savings deposits and schemes all allow multiple nominations. Nomination is optional. However, mutual funds are making nominations mandatory for folios held singly. Nominations can be made only by individual investors.

Nomination can be changed or cancelled at any time. All the joint holders must sign to make the nomination, change it or cancel it. A power of Attorney holder cannot make or change a nomination in an account or folio.

Payment Instruments

There are several accepted modes of payment for making investments. These include the following:

- Local cheques and at par cheques
- Demand drafts
- Post-dated cheques, for SIP transactions in mutual funds
- Electronic payment modes such as Electronic Clearing Service (ECS), Real Time Gross Settlement (RTGS), National Electronic Funds Transfer (NEFT)
- Standing Instructions where periodic payments have to be made as in the case of premium payments and mutual fund SIPs.
- Cash is an accepted mode of payment for some investments such as post office savings schemes. Insurance premiums can also be paid in cash. For mutual funds, cash is accepted up to Rupees 50,000 per investor per mutual fund per year
- Applications Supported by Blocked Amount (ASBA), for New Fund Offer and initial public offer purchases

In case of Mutual Funds, cheque payment is the most common mode of payment. Local cheques and At-Par cheques are accepted as payment but out-station cheques and post-dated cheques (except for SIPs) are not permitted mode for payment. The details of the cheque such as the cheque number, account number and type, bank and branch address have to be provided in the form. Demand draft is accepted as payment for applications from centres where the producer does not have an office or collection centre. Systematic Investment Plan (SIP) allows investors to accumulate a target investment sum through periodic recurring investments. The payment for purchase of units through an SIP can be through post- dated cheques or through an ECS mandate. The date on the cheque should

match the date chosen for SIP instalments. In case of ECS, the investor has to submit the bank account details of the beneficiary such as name, bank, branch, account number, MICR code[4] of the destination bank branch, date on which credit is to be afforded to the beneficiaries and the amount. Investors fill up the ECS mandate form and submit it with their application. ECS facility is available only in select cities as given by the AMC. The form should be signed by all bank account holders. The bank account has to be MICR-enabled.

All payments for transactions on the capital markets have to be routed through the first holder's bank account. This includes payments due on stock market trading account and primary market investments. Payments can be made through cheques, demand drafts and electronic payment modes.

Applications Supported by Blocked Amount (ASBA), is a facility that has been extended to investors subscribing to securities. ASBA is an application containing an authorization to block the application money in the investor's bank account for subscribing to a primary market issue. Application money is debited from the bank account only if the application is selected for allotment. The debit takes place only at the time of allotment. ASBA facility can be availed through banks specified in SEBI's list.

Payment through ASBA has two advantages. First, since the application money remains in the bank account, it continues to earn interest. Second, only funds to the extent required for allotment of units are debited from the bank account so the need for refunds is eliminated.

Insurance premiums can be paid by cheque, electronic payment options, standing instructions, debit and credit cards, demand drafts and cash.

Investment in the deposits, saving schemes and certificates offered by the post office can be made by cash or cheque. Similarly, contributions to the NPS account can be by cash, cheque or demand draft.

The payment instrument, or proof of payment instruction in case electronic and online payments or cash has to be tendered along with the application form for purchases or to the prescribed form for making periodic subscriptions or payments as in the case of premium payments or contributions to the NPS.

With effect from August 2013, banks are not accepting cheques that do not conform to the CTS-2010 (Cheque Truncation System) standards. Non-CTS cheques have to be surrendered and replaced with a new series of cheque leaves. CTS-2010 cheques will help banks save on

[4]MICR is an acronym for Magnetic Ink Character Recognition. The MICR Code is a numeric code that uniquely identifies a bank-branch participating in the ECS Credit scheme. This is a 9 digit code to identify the location of the bank branch; the first 3 characters represent the city, the next 3 the bank and the last 3 the branch. The MICR Code allotted to a bank branch is printed on the MICR band of cheques issued by bank branches.

transaction cost and clearing time since the cheque will be cleared electronically, as against physical verification done earlier.

Payment can be made electronically in several ways. If the investor has internet banking facility, direct transfer of funds can be done online from the investor's account to that of the product or service provider. If the investor and the service provider have their account with the same bank, investors can provide instructions to their bank to transfer the money to the investment account as a direct transfer. The list of banks with whom they have tied up is provided by the service provider for such facility.

Debit cards issued by selected banks can also be used to make payment. The investor can access this payment mode through the website of the service provider.

Alternately, the investor could opt for electronic fund transfer modes such as NEFT/RTGS. The NEFT and RTGS systems of RBI allow transfer of funds electronically from the account of the remitter maintaining an account in one bank to a beneficiary in his account maintained with another bank/branch. These facilities benefit investors who do not have internet banking accounts with the designated banks specified. For a transfer to go through, both sending and receiving banks have to be RTGS/NEFT enabled.

In order to perform a transaction using NEFT or RTGS, the Indian financial system code (IFSC) is necessary. IFSC is an eleven digit alphanumeric code and unique to each branch of a bank. The first four letters indicate the identity of the bank and remaining seven numerals indicate a branch. This code is provided on the cheque books.

The RTGS system is for transactions of Rs. 2 lakhs and above, so the online system will not display the RTGS option for lower investment amounts. There is no minimum amount for NEFT transactions. In order to carry out a transfer of funds through NEFT or RTGS, the bank account details of the beneficiary account holder including account number, bank and branch name and the IFSC code of the beneficiary bank branch have to be provided.

NEFT transfer takes place in batches at times defined by the RBI. RTGS transactions are settled continuously as and when they are put through on a real time basis. The charges under NEFT range from Rs. 5 to Rs. 25 per transaction depending on the amount being transferred. In case of RTGS, the charges range from Rs. 5 to Rs. 55 per transaction. Service tax is applicable on these charges.

Even if an investor does not have access to internet banking, he can opt for RTGS or NEFT by filling a request form and submitting at the bank branch with details of bank name, branch, account number and type, and IFSC code of the scheme, along with name and address of the fund. Once the request form is received, the bank will generate a unique transaction reference number. The bank's acknowledgement for the transfer request has to be appended along with the application as proof of transfer. The account number mentioned in the transfer instruction copy provided as proof should have one of the account holders as the first holder.

Since September2012, SEBI has permitted cash investments in mutual funds to the extent of Rs. 50,000 per investor per mutual fund, per financial year. This was initiated in order to enhance the reach of mutual fund products amongst small investors, in particular those who do not have bank accounts. Such cash applications should be in compliance with Prevention of Money Laundering Act, 2002, Rules and Circulars issued by SEBI, from time to time. Additionally, the asset management company should have sufficient systems and procedures in place for accepting cash transactions. Though subscriptions in cash are allowed, repayment in the form of redemptions and dividends is only permitted through banking channels.

Third party payments or payments made through an instrument issued from a bank account other than that of the investor mentioned as the first holder in the application form, will not be accepted for payment for investing in capital markets. In case of mutual fund investments, exceptions on the third party payment rule are made for grand-parents/parents making payments not exceeding Rs. 50,000 (per transaction) on behalf of a minor, employer making payments on behalf of employee through payroll deductions and custodians making payments on behalf of FIIs. A third party declaration form in which the relationship with the beneficiary has to be stated and details of the bank account through which payment will be made has to be provided. This has to be attached to the application form. The person making the third party payment must be compliant with the PAN and KYC requirements. Some investment products, such as the NPS, allow third parties to contribute towards the pension account. However, the recommendation is that the contribution be made out of own funds.

2.9. Documentation for Financial Advice

The process of providing financial advice involves collecting information from the client, evaluating the investor's situation, determining a realistic saving and investment plan that will help the client achieve their goals and executing the plan. The suitability and success of the plan will depend upon how effectively the information was captured, interpreted and acted upon. Clear documentation of the entire process will exclude chances of information being misinterpreted. From an investor protection point of view, the evaluation and advice process is expected to be documented so that unsuitable advice is not given. The SEBI (Investment Adviser) Regulations, 2013 prescribes the documentation essential to make the process of financial advice complete.

The financial adviser must enter into an agreement with the client laying out the roles and responsibilities of each party. This should include the scope of the work that will be undertaken, the agreed remuneration and an undertaking by all parties to act in good faith. The adviser must take the client through all the clauses and make sure they understand the implications. A signed copy of the agreement must be available with both parties.

The adviser must collect information on the client that is essential to advising. This includes the age, income and asset details, details on existing borrowings and liabilities and needs and goals for which they wish to save and invest. This is fundamental information based on which the plan will be made and it is best that it is recorded and verified by the client before it is used.

The suitability of investment products will depend upon the risk tolerance of the investor. This can be assessed using risk profiling tools such as questionnaires. The adviser must ensure that the investor understands the questions clearly. The interpretation of the responses must be correctly done. The responses must be seen in conjunction with the financial and personal situation of the client to arrive at the appropriate risk tolerance. The risk profile arrived at should be communicated and explained to the client. All this information should be maintained in records and periodically updated.

The investment adviser must document the process by which they short-list investment products for the client. The parameters considered to select a product must be clearly laid out particularly the performance track record.

The products that are recommended to a client should be those that are suitable given the client's goals and risk profile and ability to understand the risk and performance of the investment. The reasons for such selection must be explained to the client and documented. The key features of the investment product must be clearly laid out and explained.

The investment advice given on saving and investing for the goals must be recorded and maintained. The adviser must communicate it clearly and ensure that the implications are understood.

There are pre-investment requisites that have to be met by the client. These include undergoing the KYC process, having a demat account for holding certain types of investments, and specific type of bank account and investment account such as in the case of NRI investors, among others. The documentation associated with all these must be maintained.

Once the investments are made, the documents such as proof of investments, account statements have to be maintained for which a system has to be in place.

Regulations allow records to be maintained physically or in electronic form. If it is maintained in electronic form, then it has to be digitally signed. All records must be maintained for a period of five years. The regulatory requirements for maintenance of records and documents are discussed in detail in chapter 6.

Sample Questions

1. **A nomination made in a mutual fund folio**
   a. Can be changed by the PoA
   b. Cannot be cancelled
   c. Can be cancelled by the first holder in a jointly held account
   d. Can be changed by all the holders signing for the change

2. **In a jointly held folio, the PAN and KYC process has to be complied with by**
   a. All the joint holders
   b. The first holder only
   c. Any one of the joint holders
   d. The joint holders depending upon mode of operation

3. **An NRI returning to India and becoming a Resident Indian has to do which of the following with respect to holdings in demat account?**
   a. Operate the existing demat account
   b. Open a new demat account and transfer holdings
   c. Change the existing account status to resident
   d. Open a new account for future investment and maintain current account for existing investments.

4. **Mr. D holds investments in UPP equity scheme. He makes an investment in an MIP of the same mutual fund. Will it be held under the same folio?**
   a. No, since the scheme is different
   b. Can be held in either the same folio or different folio
   c. Can be held only under the same folio
   d. Will depend upon the mutual fund policy

5. **A request for dematerialization of securities may be rejected if**
   a. Securities are not dematerialised at the time of listing
   b. Securities are not dematerialized within the period specified by SEBI
   c. Dematerialization request is not accompanied by R&T verification of signature.
   d. Delay of more than 15 days in the receipt of physical securities from the day of electronic request.

6. **Ms. L takes a loan against her mutual fund holdings. Only a portion of her units are required as security. How will she give effect to this?**
   a. Transfer the required portion to a new folio and mark a lien on it
   b. Mark lien on the entire holdings, irrespective of the requirement
   c. Mark lien only on the portion required in the existing folio
   d. Transfer the required portion to a new folio and make the lender the joint holder

CHAPTER 3: PERSONAL FINANCIAL PLANNING

LEARNING OBJECTIVES:

After studying this chapter, you should know how to:

- Evaluate the financial position of clients through some important ratios
- Prepare and analyse household budget
- Plan for contingency
- Estimate financial goals

3.1. Evaluating the financial position of clients

The personal financial situation of an individual or a household primarily refers to its ability to manage its current and future needs and expenses. The income available to do this may be drawn from a business or profession or from the assets created over time by saving and investing a portion of the income. Typically, assets are created to meet the future expenses of the household, and financial planning helps apportion the available current income to immediate expenses and savings for the future. Loans are used to meet expenses and to create assets, if the income is inadequate to meet all the needs. This creates a liability for the household which also has to be settled in the future from the income. The efficiency with which the interplay between income, expenses, assets and liabilities are handled by the household determines its financial situation. Insurance planning is an essential element of a financial plan. Insurance is an efficient way of protecting the household finances from a loss of income or a large, unexpected expense that can derail the financial situation. Similarly, meeting income needs in retirement is an important concern and financial goal for all households. Insurance and retirement planning have been dealt with at length in the NISM-Series-X-A Investment Adviser (Level 1) Certification Examination.

Just as analysts use various ratios to assess the financial position of companies, similarly, investment advisors use various personal finance ratios to assess the financial position of their clients. These ratios are calculated using the income, expenses, savings and investment data for each client and gives a numerical snapshot of their current situation. It helps identify areas that require changes and helps set the course of action for the future. Personal finance ratios thus form an important input in the financial planning process. Some of the important ratios are as follows:

3.1.1 Savings Ratio & Expenses Ratio

Savings Ratio is the percentage of annual income that a person is able to save. It is calculated as Savings per year/Annual Income.

ABC earns an annual income of Rs6 lakhs and saves Rs 60,000 from the income. The savings ratio is Rs 60,000 ÷ Rs 6,00,000 = 10%.

Savings is not limited to money that is retained in the savings bank account. Money invested in fixed deposits, mutual funds, shares, debentures, public provident fund, national savings certificates, post office deposits, real estate, gold and others during the year also form part of the savings.

Some savings may not even reach the investor during the year. For example, the company's contribution to provident fund or superannuation fund on account of the investor. The money will not go to the investor immediately, but it belongs to the investor and will be available in the investor's account with the provident fund or superannuation fund and will form part of the savings during the year.

Annual income will include all income earned from employment or business and in the form of interest, dividend, rent and such during the year.

Consider the following information. XYZ earned a gross salary of Rs 10,000, including company's contribution to provident fund of Rs 500. Net take home salary was Rs 9,000 after deducting Rs 500 towards employee's contribution to provident fund. XYZ earned Rs 200 towards interest in the savings bank account. Expenses during the month were Rs 7,000. What is the savings ratio?

Total Income: Gross salary + Interest income = Rs 10,000 + 200 = Rs 10,200

Savings: (Net salary + Interest income + Contributions of employer and employee to provident fund) – (Expenses) = Rs 9,000 + Rs 200 +Rs 500 + Rs 500 – Rs 7,000 =Rs 3,200.

Savings Ratio: Savings /Total Income = Rs 3,200 ÷ Rs 10,200 =31.4%.

The Savings to Income ratio measures the total accumulated savings of the individual relative to the annual income. It is calculated as Total Savings/Annual Income.

Consider the following information of the financial situation of GGN.

Annual salary: Rs. 12,00,000

Accumulated investments, including PF balance, value of bank deposits, mutual fund units, PPF, NSC: Rs. 15,00,000

Savings to Income ratio: Rs. 15,00,000 / Rs. 12,00,000= 1.25

This ratio measures the preparedness to meet long term goals such as retirement. The current value of the investments and assets, after accounting for any outstanding loans taken to acquire the same, is taken to compute the total savings. Self-occupied home is typically not included when calculating the savings level.

The appropriate level for this ratio will depend upon the age of the individual. When the individual is young, expenses are high relative to the income available and the accumulated savings are likely to be low. Moreover, at this stage much of the available surplus is likely to

go towards servicing a home loan. The ratio is expected to improve over time, as income goes up and expenses stabilize. A suitable savings to income ratio in the early 40s is at least 3 times the annual income. This means that the annual savings rate, or the annual savings relative to income, has to be stepped up as income levels go up, so that the savings can be built to a level that is suitable to the age and stage in life.

In the earlier example, if ABC has saved Rs 60,000 out of an income of Rs. 6 lakhs, it stands to reason that Rs 6,00,000 – Rs 60,000 i.e. Rs 5,40,000 was spent towards various expenses.

The Expenses Ratio is calculated as Annual Recurring Expenses ÷ Annual Income. In the case of ABC, it amounts to Rs 5,40,000 ÷ Rs 6,00,000 = 90%.

Expenses Ratio can also be calculated as 1 – Savings Ratio. Similarly, Savings Ratio is 1 – Expenses Ratio.

Non-recurring expenses are kept out of the expense ratio. For example, if a person incurred a one-time medical expenses of Rs 50,000 in a year, then that would be excluded. However, if it is found that on an average, every year the family spends Rs 30,000 towards healthcare expenses (beyond any re-imbursement from employers or insurers), then these would be included in determining the expense ratio.

Suppose a family goes on a foreign holiday every 3 years, when they spend about Rs 6,00,000, then its annual equivalent viz. Rs 2,00,000 will be considered in the expense ratio.

Expenses may be mandatory, such as taxes, rents, EMIs for loans and necessities for living. Discretionary expenses are those items of expenses that are not essential. Much of the reduction and rationalisation of expenses happen with respect to discretionary expenses in order to improve the savings ratio. A low expense ratio and high savings ratio is desirable for an individual's financial security and stability.

3.1.2 Total Assets

Savings of the individual are deployed in various forms of physical and financial assets such as shares, debentures, mutual funds, real estate, gold, provident fund, superannuation fund, and others over a period of time. The current value of these assets constitutes the investor's total assets. Physical assets such as real estate is typically acquired with a combination of savings and loans.

A conservative approach would be to exclude personal jewellery, one residential house that the investor's family stays in, and any other form of asset meant for personal use (e.g. car) while estimating assets available to meet goals and financial needs

3.1.3 Total Liabilities

Liabilities include loans and different forms of credit taken to meet expenses or to acquire assets. These may be taken from institutional sources, such as banks and financial institutions, or from personal sources such as friends and relatives. Liabilities may be long

term and secured on assets, such as mortgage towards purchase of house and car loans. Or they may be short-term and unsecured, such as credit card outstanding and personal loans. Such liabilities tend to be more expensive.

Liabilities imply an obligation to repay the loan from the future income. This impacts the ability of the household to meet other expenses and to save for other assets. It must be used with caution, ideally to acquire assets that appreciate in value. Greater is the liability, more shall be the financial pressures on the investor for repayment.

3.1.4 Leverage Ratio

This is a measure of the role of debt in the asset build-up of the investor. It is calculated as Total Liabilities ÷ Total Assets.

For example, an investor owns real estate worth Rs.50 lakhs, investments and bank balances valued at Rs.10 lakhs, and Rs.5 lakhs is lying in provident fund account. The real estate was bought with a loan of Rs 30 lakhs, of which Rs 10 lakhs is currently outstanding. The investor also has credit card dues of Rs 2 lakhs and a loan of Rs 1 lakh from a friend.

Total assets = Rs 50 lakhs + Rs 10 lakhs + Rs 5 lakhs i.e. Rs 65 lakhs.

Total liabilities = Rs 10 lakhs + Rs 2 lakhs + Rs 1 lakh i.e. Rs 13 lakhs.

Leverage Ratio = Rs 13 lakhs ÷Rs 65 lakhs i.e. 20%.

Higher the leverage, more risky it is for the individual's financial situation. A ratio greater than 1 indicates that the assets will not be adequate to meet the liabilities. The ratio is likely to be high immediately after a large-ticket asset, such as real estate, is purchased with debt. Over time as the asset value appreciates, the ratio will also moderate. Investor needs to look at the leverage in the context of debt servicing capability, as discussed later in this Chapter. Further, investor needs to ensure that a risky investment position is not compounded with high leverage financing it.

3.1.5 Net Worth

A strong asset position is of no use, if most of these are acquired through loans that are outstanding. Similarly, liability is not bad, if it has been used for creating an asset, such as real estate, which has the potential to appreciate in value.

It is therefore normal to monitor any investor's financial position through the net worth. It is calculated as Total assets – Total liabilities.

In the previous example,

Net worth = Rs 65 lakhs – Rs 13 lakhs i.e. Rs 52 lakhs.

Net worth is monitored over a period of time to monitor improvement or deterioration in the financial position.

3.1.6 Solvency Ratio

Despite having assets, a person may be insolvent, if the liabilities are higher than the value of the assets held. A critical benchmark is that the individual's net worth should be positive.

The extent of the investor's solvency can be determined through the solvency ratio, which is calculated as Net Worth ÷ Total Assets. For the same asset position, higher the solvency ratio, stronger the investor's financial position.

In the above example, it is calculated as Rs 52 lakhs ÷ Rs 65 lakhs i.e. 80%.

It can also be calculated as 1 – Leverage Ratio. Similarly, Leverage Ratio = 1 – Solvency Ratio.

3.1.7 Liquid Assets

Liquid assets are those assets that can be easily converted into cash at short notice to meet expenses or emergencies. Liquid assets include money in savings bank account, fixed deposits that mature within 6 months, investment in short-term debt schemes of mutual funds and such other short-term assets. On the other hand, there are assets that are not easy to convert into cash. For example, it can take a long time to sell real estate at the fair value and realize it.

Closed-end mutual fund units may not be as easily realizable as units of open-end mutual fund units. Some assets may be easily converted into cash but their values may fluctuate widely in the short-term, thus making them unsuitable for realising cash at short notice. Shares and open-end equity schemes fall under this category. Open-end debt schemes too have a significant market element in their valuation which makes their return volatile, and therefore unsuitable to meet the need for funds at short notice.

More the money in liquid assets, lesser are the chances of the investor getting caught in a liquidity crunch. However, keeping all one's money in liquid assets is not a sensible solution. Liquidity comes at a cost. For example, banks usually offer lower rate of interest on shorter-term fixed deposits; liquid schemes may yield a lower return than longer-term debt schemes.

Investors therefore need to balance their liquidity and return needs. Keep enough in liquid assets to meet liquidity requirements, and invest the balance in longer term assets with a view to earning superior return.

3.1.8 Liquidity Ratio

The role of liquid assets is to meet the near-term liquidity needs of the individual. It is normal to calculate the liquidity needs as the expenses that an investor will incur over the following 6 months (including loan repayments). In exceptional situations, expenses over a longer period may be considered.

Liquidity ratio measures how well the household is equipped to meet its expenses from its short-term assets. It is calculated as: Liquid Assets/Monthly Expenses.

A ratio of at least 4 to 6 indicates a comfortable level for the household to meet its expenses for 4 to 6 months, even if there was a loss or decline in regular income.

Consider the financial situation of NFG. The monthly expense incurred, including loan repayments, is Rs.1.5 lakh. The market value of the assets held are as follows:

- Shares Rs 3 lakhs
- Savings bank account Rs. 7 lakhs
- Short-term Fixed Deposits Rs. 2 lakhs
- Long-term Fixed Deposits Rs. 6 lakhs
- Open-end liquid mutual fund schemes Rs. 4 lakhs
- Other open-end mutual fund schemes Rs. 5 lakhs
- Closed-end mutual fund schemes Rs. 12 lakhs

Liquid assets = Rs. 7 lakhs + Rs. 2 lakhs + Rs. 4 lakhs = Rs. 13 lakhs.

Liquid Ratio = Rs. 13 lakhs ÷ Rs. 1.5 lakhs = 4.66.

A ratio of around 6 indicates a comfortable situation to manage short-term obligations.

Note: Shares have not been included in liquid assets because the uncertainty in the value of the share makes it risky for an investor to include in liquid assets.

Another liquidity ratio that is tracked is the Liquid assets to Networth ratio. This ratio has to be interpreted in light of the goals of the individual. If there is a longer period to the goals, then this ratio should be low. A high ratio would indicate that a large portion of the savings are held in liquid assets and would be earning low returns. This will affect the ability to meet their long-term goals efficiently. If goals have to be met in the near term, then adequate assets must be held in easily realisable assets. In this situation the ratio needs to be higher.

3.1.9 Financial Assets Ratio

Assets can broadly be categorised as financial assets such as shares, debentures, bank deposits, Public Provident Fund, mutual fund investments and others, and physical assets such as gold, other precious metals, diamonds and real estate. Financial assets have the advantage of greater liquidity, flexibility, convenience of investing and ease of maintaining the investments. They are primarily income generating investments, though some of them, such as equity-oriented investments are held for long-term capital appreciation. There is greater ease of investing in such assets as it lends itself to small and frequent investments.

Consider the assets held by PQR:

Shares Rs. 5 lakhs, Fixed Deposits Rs. 10 lakhs, Mutual Fund Investments Rs. 12 lakhs, Land Rs. 9 lakhs and Gold Rs. 14 lakhs

Financial assets are Rs. 27 lakhs (5 + 10 + 12)

Physical assets are Rs. 23 lakhs (9 + 14)

Total assets are Rs. 50 lakhs (27 + 23)

Financial assets ratio = [(Rs. 27 lakhs ÷ Rs. 50 lakhs)*100] = 54%.

A higher proportion of financial assets is preferred especially as goals are closer to realisation and there is a need for income or funds to meet the goals.

3.1.10 Debt to Income Ratio

Leverage ratio measures the extent of debt use in asset acquisition. It however does not directly measure the ability of the individual's income to service or meet the obligations arising from all debt outstanding. Debt to income ratio is an indicator of the individual's ability to manage current obligations given the available income and a parameter used by lenders to determine eligibility for additional loans.

It is calculated as Monthly Debt Servicing Commitment ÷ Monthly Income.

Debt servicing refers to all payments due to lenders, whether as principal or interest.

Consider an example where an individual has a monthly income of Rs.1.5 lakh and has loan commitments of Rs. 60,000 per month. The Debt to Income ratio = Rs.60,000/Rs.150,000= 40%.

A ratio higher than 35% to 40% is seen as excessive. A large portion of the income of the household is committed to meet these obligations and may affect their ability to meet regular expenses and savings. Obtaining loans in the case of an emergency may also become difficult. Any reduction in income will cause stress to the household's finances.

Personal Finance Ratios need to be calculated periodically, say once a year, and compared with past numbers to identify trends. They help identify areas where corrective action needs to be taken to improve the financial situation. The trends also show the efficacy of actions already taken. While benchmarks have been established for each of the ratios, they may have to be customized to each individual's situation.

3.2. Preparing Household Budget

The investment adviser performs an important role in helping the family understand its household budget. Preparing a household budget entails an understanding of the sources from which the family receives income, and the application of these funds+ in a typical month. A sample household budget is shown in Table 3.1.

The difference between monthly surplus in hand and savings is to be noted. The monthly surplus in hand is calculated after mandatory deductions for contributions to funds and various investments. These are added back to the monthly surplus in hand to arrive at the savings.

In the savings ratio calculations that was discussed earlier, gross salary (and investment income) is considered in the denominator.

What is ABC Family's liquidity ratio if they have Rs 3,00,000 in liquid assets?

Let us assume that 6 months expenses need to be covered. Monthly expenses to consider are Rs 79,000 (regular expenses) and Rs 12,000 (loan servicing) i.e. Rs 91,000.

Liquidity Ratio = Rs 3,00,000 ÷ (Rs 91,000 X 6) i.e. 54.95%.

Table 3.1

Monthly Household Budget of ABC Family

					(In Rupees)	
			Mr. A	Ms. B	Total	
I		**Income**				
	a. Salaries	Gross Salary	50,000	60,000	1,10,000	
	b.	Income from Investment	15,000	12,000	27,000	
		i. Total Income	65,000	72,000	1,37,000	
II		**Expenses**				
	a.	*Mandatory Expenses*				
		ii. Contribution to PF	4000	5000	9000	
		iii. Tax	5000	7000	12000	
		iv. Loan repayment		12000	12000	
	b.	*Essential Living Expenses*				
		v. Grocery			12,000	
		vi. Fees and education			15,000	
		vii. Rent, Maintenance & Other charges			15,000	
		viii. Transportation			10,000	
		ix. Telephone and Internet			7,000	
		x. Utilities			5,000	
	c.	*Discretionary Expenses*				
		xi. Entertainment			5,000	
		xii. Lifestyle expenses			10,000	

		xiii. Total Expenses			112000	
III		**Investments**	10,000	8,000	18,000	
		xiv. Net Income			1,16,000	i - (ii + iii)
		xv. Monthly surplus in hand			7,000	i - (xiii + III)
IV		**Savings**			34,000	ii + III + xv
		Savings Ratio			24.8%	IV/i

3.3. Analysis of Household Budget

The household budget has to be seen in the context of the financial goals of the family, and its overall financial position. Financial goals are discussed later in this chapter; overall financial position is a topic in the next chapter.

The family's savings ratio of 24.8% is satisfactory, though a household with double income can aspire to a higher savings ratio.

If the savings seem inadequate given the financial goals of the household, then the investment adviser needs to explore with the family, ways in which to save more.

The investment adviser also needs to point out that the monthly surplus in hand is on the lower side. Therefore, any unexpected expenses will need to be met out of past savings. The position can be improved if savings ratio can be increased (by increasing income or reducing expenses or earning better returns on prior investments). The discretionary expenses category is the first area where reductions should happen. The household can also consider some rationalisation in the essential expenses. This will go towards increasing the surplus available for saving and investment.

3.4. Contingency Planning

Investment advisers need to prepare the client for various contingencies that might come up. The family's financial strategy needs to provide for these risks. The following are typical contingencies to provide for:

- ABC Family is clearly dependent on both incomes. If anything were to happen to either earning member, the family will be dire straits. Life insurance, discussed in the next chapter, mitigates this risk.
- Healthcare costs are another financial risk for any family. Medical insurance, discussed in the next chapter, addresses this risk.

- Income streams are also affected if people lose their jobs. The double income in this case offers some kind of insurance against the job loss risk. If one loses the job, the other hopefully will retain the job. This would ensure that some income keeps coming in every month.
- An emergency fund needs to be the first goal towards which a household should save as a protection against the possibility of loss or reduction of income. The fund should be adequate to meet the expenses for six months, in the event the regular income is not available. The emergency fund should be held in liquid assets, as discussed earlier, to enable easy access as and when required. If income security is high, the fund can also be held in a laddered way, with the equivalent of around three months' expenses being held in liquid assets, and the rest of the funds being held in a less liquid assets but which gives better returns. If the emergency fund is used then efforts must be made to replenish it as soon as possible. The adequacy of the emergency fund should also be periodically reviewed. It should be done annually or whenever there is a large addition, such as an EMI, to the monthly expenses.
- Separation (divorce) is another risk that families face.

In developed countries, the wealthy go in for pre-nuptial agreements. This is an agreement, entered into before marriage, which details how the finances (and any other matter) will be dealt with, in the event of a separation. The legality of such pre-nuptial agreements in India has not been established.

The investment adviser should ensure a healthy distribution between both spouses of the holdings of the family's assets and liabilities. For example, in some investments, one partner will be the first holder, while the other may be a joint holder; the holding pattern can be reversed in some other investments.

In the case of double income families, the holding pattern can be closely aligned to the source of income of the investment. Investment made out of incomes of one partner can be held with that partner as the first holder.

Another approach would be to keep the salary account of each partner distinct (with the other partner as joint holder). This account is to be used only for investments, or to transfer funds to another joint account that is used for meeting household expenses. Such segregation of investment flows and household expense flow helps in better expense monitoring, as well as investment record keeping and tax record keeping.

When a housing loan is taken for purchase of property, the partners can be joint owners of the property as well as joint borrowers for the loan.

3.5. Estimating Financial Goals

Most aspirations of a family have a financial implication. Purchase of house, buying a car, medical education for daughter, seed capital for son's business, international holiday – realization of each of these aspirations requires money. Thus, a financial goal can be quantified for each of these aspirations.

Consider a family which has the medical education of the daughter as a financial goal. She is now in her 10th standard.

The financial requirements are spread over a period of about 6 years – 2 years of under-graduate studies, coaching class expenses for preparing for the medical entrance exams, followed by the medical education and hostel expenses.

An estimate of these future expenses (the financial goals) requires the following inputs:

- How much would be the expense, if it were incurred today?
- How many years down the line will the expense will be incurred?
- During this period, how much will the expense rise on account of inflation?
- If any of these expenses are to be incurred in foreign currency, then how would changes in exchange rate affect the financial commitment?

Suppose the inputs are as follows:

Year	Current Cost (Rs)	Likely Inflation (% p.a.)	Likely Exchange Rate impact (% p.a.)
1	100,000	7%	N.A.
2	120,000	7%	N.A.
3	1,000,000	7%	N.A.
4	500,000	7%	N.A.
5	500,000	7%	N.A.
6	500,000	7%	2%

The costs mentioned above, in today's terms, need to be translated into the rupee requirement in future. This is done using the formula $A = P \times (1 + i)^n$, where,

A = Rupee requirement in future

P = Cost in today's terms

i = inflation

n = Number of years into the future, when the expense will be incurred.

The below-mentioned calculations can be done on calculator. However, the calculations are easier, using MS Excel formulae.

For instance, the Rs 120,000 money requirement of 2 years down the line, calculated at today's prices, translates into a future rupee requirement of "=120,000 X (1 + 7%) ^ 2 " (as entered in MS Excel). The answer is Rs 137,388. It can also be calculated using the 'FV' function in MS Excel.

While computing the value in calculator, 'Exp' or 'x^y' function can be used instead of '^'. The value within brackets can be calculated first and then the value after applying the 'Exp' or 'x^y' function can be stored in memory. The number in memory can be multiplied by the '120,000' value to arrive at Rs 137,388.

The same exercise done for each year's expense gives a year-wise future rupee requirement as follows:

Year	MS Excel Formula	Future Rupee Requirement
1	=100,000 X (1 + 7%) ^ 1	Rs 107,000
2	=120,000 X (1 + 7%) ^ 2	Rs 137,388
3	=1,000,000 X (1 + 7%) ^ 3	Rs 1,225,043
4	=500,000 X (1 + 7%) ^ 4	Rs 655,398
5	=500,000 X (1 + 7%) ^ 5	Rs 701,276
6	=500,000 X (1 + 7% + 2%) ^ 6	Rs 838,550

[Strictly, the formula for Year 6 should read =500,000 X ((1 + 7%) * (1 + 2%)) ^ 6. However, since inflation and exchange rates used are in any case a projection, this mathematical refinement is normally avoided. The simpler approach of adding the inflation and currency depreciation rates is adopted.]

These are the financial goals that need to be met, in order to realize the aspiration of seeing the daughter become a doctor.

As part of the financial plan preparation, the investment adviser needs to ensure that the financial goals of the household are clearly defined in terms of the funds required and time available to accumulate it, and realistic given their financial situation. The next chapter discusses the ideas of prioritizing goals and choices for funding the goals.

Sample Questions

1. **Which of the following is an indication of indebtedness?**
   a. Expenses Ratio
   b. Leverage Ratio
   c. Solvency Ratio
   d. Net Worth

2. **Current cost is translated into a cost in future using which of the following formulae?**
   a. $P X (1 + i)^n$
   b. $P \div (1 + i)^n$
   c. $P X (1 - i)^n$
   d. $P \div (1 - i)^n$

3. **Read the following caselet and answer the questions that follow:**

Mr. P earns a gross salary of Rs 50,000, including company's contribution to PF of Rs 5,000; an equal contribution is made by Mr. P. Deductions are made towards loan repayments of Rs 4,000 and investments of Rs 1,000. Mr. P receives Rs 3,000 towards income from past investments. He spends Rs 7,000 on rent, Rs 11,000 on grocery and Rs 15,000 on other expenses.

   a. What is the net take home salary of Mr. P?
      i. Rs 40,000
      ii. Rs 35,000
      iii. Rs 45,000
      iv. Rs 5,000

   b. What is the monthly surplus of Mr. P?
      i. Rs 5,000
      ii. Rs 10,000
      iii. Rs 15,000
      iv. Rs 16,000

   c. What is the monthly savings of Mr. P?
      i. Rs 5,000
      ii. Rs 10,000
      iii. Rs 15,000
      iv. Rs 16,000

   d. What is the savings ratio of Mr. P?
      i. 42.1%
      ii. 11.3%
      iii. 30.2%
      iv. 20.8%

CHAPTER 4: COMPREHENSIVE FINANCIAL PLANNING

LEARNING OBJECTIVES:

After studying this chapter, you should know about:

- Role of debt financing, debt counseling and calculating debt servicing requirement of an individual
- Investments based on liquidity and financial goals
- Risk profiling, asset allocation and portfolio management for different categories of individuals
- Fundamental principles of insurance, life and non-life insurance products
- Retirement planning

4.1. The role of debt

The previous chapter discussed leverage ratio, which is calculated as Total Liabilities ÷ Total Assets. The ratio is an indicator of the basic solvency of the household and a ratio of greater than one is a trigger for action to reduce debt and for financial restructuring.

Debt is used to finance goals when available funds are inadequate. For example, most people cannot buy a house without a loan. Lenders protect themselves by securing their loan against a mortgage on the property. Such loans are also called 'mortgages'. Other debt include auto loans, credit taken for buying consumer durables, personal loans and credit card outstanding. However, debt comes at a cost and imposes a repayment obligation on the borrower. The decision on whether or not to use debt will depend upon the ability of the available income to bear the additional charge of interest cost and repayment.

Debt is not always bad. In some cases, the decision to use borrowed funds over own funds, also called leverage, may actually increase the return made on an investment. In some cases, a loan may make more sense in a given situation. For example, an education loan may be a better choice than drawing from a retirement account to fund the children's education.

Suppose two investors, X and Y, are considering an investment proposal worth Rs 100,000, which is expected to yield a return of 12% p.a. (ROI). While X will be using own funds, Y proposes to borrow 60% of the money required, at a cost of 10% p.a. Thus, Y will be using own funds to the extent of 40%. The ratio of 60% to 40% i.e. 1.5 is called debt-equity ratio or leverage. (Note the difference from the leverage ratio discussed earlier. Use of the two terms varies with the context).

If the investment proposal yielded the expected return, then what was the return on equity (RoE) for X and Y? The calculations are shown in Table 4.1.

Table 4.1

Return on Investment (Base Case: 12%)

	X	Y	Calculation
a Investment (Rs)	1,00,000	1,00,000	
b Return offered by the investment	12%	12%	
c Debt-Equity Ratio / Leverage	0.0	1.5	
d Borrowed Funds	0	60,000	a X c ÷ (1+c)
e Own Funds	1,00,000	40,000	a - d
f Rate of Interest on borrowing	N/A	10%	
g Return offered by the investment (Rs)	12,000	12,000	a X b
h Interest cost on borrowed funds	N/A	6,000	d X f
i Net Return	12,000	6,000	g - h
j Return on Investment (RoI)	12%	15%	i ÷ e

Since X did not opt for leverage, RoE is the same as ROI viz. 12%.

Y financed part of the investment by borrowing at 10%, which is lesser than the ROI. This helped boost the RoE to 15%.

Now, suppose there was a problem on account of which the investee company was able to give X and Y a return (ROI) of only 8% (instead of the 12% that was promised). What is the revised RoE for the two investors? The calculations are shown in Table 4.2.

RoE for X would be down from 12% to 8%. However, Y's RoE is down steeply from 15% to 5%.

If the investee company were to merely return the funds to X and Y, without offering any return, Y's RoE would be down to -15%. (Calculate to find out how).

Thus, debt boosts RoE, when the ROI is more than the cost of borrowing; however, it will drag the ROE down – even make it negative - if the borrowing cost turns out to be higher than the ROI.

Table 4.2

Return on Investment (Revised Case: 8%)

	X	Y	Calculation
a Investment (Rs)	1,00,000	1,00,000	
b Return offered by the investment	8%	8%	
c Debt-Equity Ratio / Leverage	0.0	1.5	
d Borrowed Funds	0	60,000	a X c ÷ (1+c)
e Own Funds	1,00,000	40,000	a - d
f Rate of Interest on borrowing	N/A	10%	
g Return offered by the investment (Rs)	8,000	8,000	a X b
h Interest cost on borrowed funds	N/A	6,000	d X f
i Net Return	8,000	2,000	g - h
j Return on Investment (RoI)	8%	5%	i ÷ e

4.2. Financial pressures from debt

While some debt is good and may even be recommended, how much debt is good depends upon the financial situation of each household. A good indicator is the debt to income ratio discussed in the previous chapter that measures the ability to meet the obligations arising from debt with the available income. A thumb rule of 35% to 40% was suggested for this ratio.

Consider a salaried employee who draws a salary of Rs 15,000 per month, and is paying Rs 7,500 towards debt servicing. The debt servicing ratio comes to Rs 7,500 ÷ Rs 15,000 i.e. 50%. This is too high. If 50% goes towards debt servicing, it affects the ability to meet other regular expenses, provide for emergencies and the person may have nothing left to invest for the future.

4.3. Debt Counseling

Investment advisers need to consider the following, while advising investors on debt:

4.3.1 Purpose of the debt

Debt should ideally be taken for acquiring appreciating assets such as real estate. Or, debt may be recommended to meet an expense that will increase the value of an asset, say an education loan to upskill, so that the income generating ability of the person goes up.

Financing risky or volatile investment propositions with debt may entail high risk and may put the entire financial security at risk. Margin financing for stock market investing is one such investment. A fall in the value of the investment will magnify the loss since the cost of debt will also have to be accounted for. Debt should certainly not be used for financing one's regular expenses. If a person starts borrowing to meet expenses, then he is clearly living beyond his means and likely to be in a debt trap. Taking short term debt to tide over temporary liquidity problems may be fine as long as the borrower knows the risk and has a plan to repay the debt as soon as possible.

4.3.2 Cost of debt

Higher the rate of interest at which money is borrowed, more will be the outgo in servicing the debt. Secured loans, such as mortgages, and education loans are relatively cheaper. Unsecured loans such as personal loans and credit card debt are very expensive and must be used with caution. Credit card is an interest free borrowing option only if the use is within the limits specified, and the repayments are made by the due date each month. . When the credit card user does not pay the entire amount i.e. some amount is carried over for payment in the following business cycles, it is called "revolving credit". If a credit card company charges 3% p.m. as interest, the compounded annual cost is (1+3%)^12 - 1 i.e. 42.6%. Given the exorbitant cost, revolving credit should be avoided.

4.3.3 Maturity of debt

Shorter the tenor of the loan; more will be the periodic repayment putting pressure on available income. Even if the cost of debt is low, short loan tenor can put financial pressures in repayment. Therefore, loan tenor should be decided keeping in mind the repayment capacity of the borrower. A longer tenor loan translates into higher interest paid over the term. The debt to income ratio can be used as an indicator of what the household income can take on as repayment obligations, and decide on the tenor accordingly.

4.3.4 Debt Re-scheduling

If the borrower is unable to manage the debt repayments, then it helps to work out a solution as soon as possible. Potential solutions are as follows:

- Rank debt in order of their cost and deal with the costliest debt first. Typically, credit card dues and personal loans will be the most expensive, and work to eliminate them from the outstanding debt list. Low cost debt and debt that provide tax benefits such as home loans and education loans can be dealt with later when finances permit.
- If the debt was taken for purchasing an asset, then the asset can be sold and the proceeds used for pre-paying the debt. While doing this, the borrower should also plan for any pre-payment charges that the bank may levy.

- If the cost of debt is high, then cheaper re-financing is an option. A lower cost loan can be availed to repay the costlier loan. Credit card balance transfers is an example of such refinancing.
- If the problem is with the tenor of the loan, then the possibility of extending the tenor of the loan can be explored. This will reduce the monthly outgo in debt servicing. However, the loan will be repaid over a longer period of time and total interest paid over the tenor of the loan will go up.
- If none of these is possible, then the borrower should inform the lender about the problem and explore a revised loan schedule. It should however be noted that such re-scheduling of loans hurts the borrower's credit history. This will affect the chances of obtaining loans in future or the cost at which they will become available.

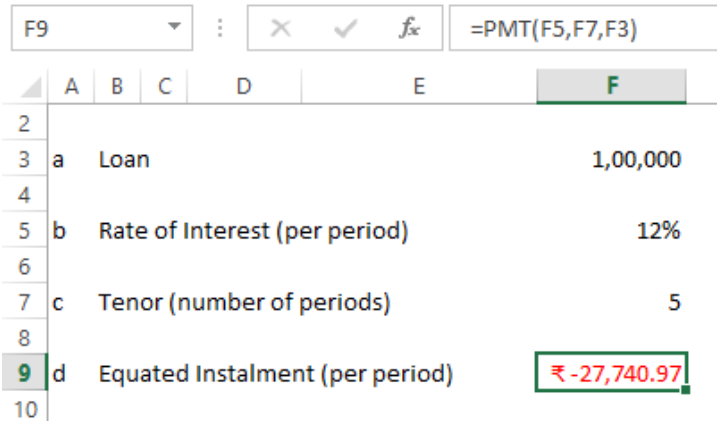
4.4. Calculating the debt servicing requirement

Many investors need assistance in understanding how much loan is good for them. The financial pressures arising from debt are linked to debt repayment. What is the Equated Monthly Instalment (EMI) for a loan under consideration?

EMI can easily be calculated in MS Excel using the '=pmt' function as shown in the example Table 4.3.

Table 4.3

Determining the EMI



The point to note is that b, c and d in the table are defined in terms of per period – a year in the above case. If each year Rs 27,740.97 is to be paid, then the monthly payment would be Rs 27,740.97 ÷ 12 i.e. Rs 2,311.75, payable for 5 X 12 i.e. 60 months. This instalment represents a combination of principal and interest.

If the debt is at 1% per month interest and loan is to be repaid in 5 years, interest per period would be 1% and number of periods would be 60. Accordingly, the equated instalment would be Rs 2,224.44, by changing the variables in Table 4.3.

Lenders use the term 'rest' to indicate the interest charging cycle, which can be different from the payment cycle. For example, interest is chargeable at 12% p.a. on annual rest. The repayment obligation needs to be worked out, initially for the interest charging cycle (period =1 year in this example). Thereafter, each instalment is calculated. Thus, if payment cycle is quarterly, the annual instalment is to be divided by 4; monthly instalment is calculated by dividing the annual instalment by 12.

Suppose interest is chargeable on annual rest and payment cycle is monthly. The implication for the borrower is that although repayments are being made monthly, the lender will adjust the loan obligations (for calculation of interest charge) only every year. Since borrower is not getting credit for payments made during the year, the effective borrowing cost turns out to be higher than the interest rate quoted by the borrower.

If the borrower earns Rs 10,000 per month, and this is the only debt, then debt servicing ratio would be Rs 2,224.44÷ Rs 10,000 i.e. 22.24%.

This can be reduced by increasing the tenor or reducing the interest cost or reducing the amount borrowed. Suppose the tenor is extended to 6 years. Then the EMI changes from Rs 2,224.44 to Rs 1955.02. The revised debt servicing ratio is 19.55%.

If the borrower has another loan on which repayment is Rs 1,000 per month, then total debt servicing is Rs 1,955.02+ Rs 1,000 i.e. Rs 2,955.02. Debt servicing ratio would then be 29.55%.

4.4.1 Credit Score

Credit score is a number assigned to each individual by a credit information bureau based on their credit behaviour and history. A credit bureau is licenced by the RBI and governed by the Credit Information Companies (Regulation) Act, 2005. The credit and financial health of the individual is assessed on the basis of the outstanding loans and credit facilities used, repayment behaviour exhibited, utilization of credit limits, type of loans i.e. the proportion of credit card outstandings, personal loans and other unsecured loans, and other factors that may affect the ability to service loans. This information is reported on a monthly basis by providers of loans and credit to the credit information companies. Here it is collated and used to develop the credit score and the credit report. For example, the CIBIL TransUnion Score is a three digit number ranging from 300 to 900.

Banks, Housing Finance Companies, NBFCs use this score and report for making decisions on a loan application to determine interest rate, loan eligibility and credit limits. A high credit score makes the lender consider the loan application and the terms of offer.

A good credit score and credit report can be built by dealing with debt responsibly. Always pay dues on loans, credit cards and others on time. Credit utilization relative to credit available should be kept low. Too much of unsecured loans such as credit cards and personal loans have a negative impact on the score. For a good score it is important to have a mix of secured and unsecured credit and to apply for credit, or make credit enquiries only when required, and in moderation. A person's credit score is also affected by the repayment behaviour in loans where they are joint holders or guarantors. Review the credit report periodically so that any errors can be identified and rectified.

4.5. Investments for Liquidity and Financial Goals

The concepts of liquidity ratio and financial goals were introduced in the previous chapter.

Liquidity needs are short-term in nature. For example, household expenses over the next 6 months. Investments for liquidity should be in avenues that can be easily liquidated without much concern about capital erosion. Therefore, the investment should be in debt that is short term in nature. For example, savings bank account, current account, short-term fixed deposits and liquid schemes of mutual funds. These are referred to as liquid assets.

Financial goals are long-term in nature. Savings towards financial goals too can be deployed in liquid assets. However, liquidity comes at a price in the form of lower yields on the investment. For example, money deposited in savings bank account would yield, say, 3%.

Consider a situation where an investor XYZ has provided for all the money that may be required to support the son's future business viz. an amount of, say, Rs 50,00,000. The amount is adequate if the son is to start the business today. The investor chooses to keep the entire money in a savings bank account, yielding 3% p.a. interest.

The son decides to get into business after 5 years. How much would be available in the savings bank account. If tax is ignored, and if we assume that the bank will credit interest every month, the savings bank will have Rs 50,00,000 X (1 + (3%÷12))^60 i.e. Rs 58,08,084 as shown in Table 4.4.

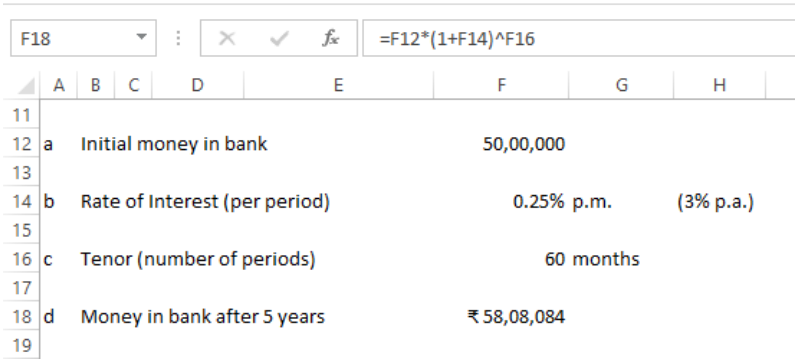
Is this amount adequate for the son's business? If inflation during the period was 10% p.a., then the money required for business after 5 years is Rs 50,00,000 X (1+10%)^5 i.e. Rs 80,52,550.

Thus, although XYZ has adequate money for the business today, it will be inadequate after 5 years, if the money is parked in savings bank account. XYZ will have protection from

inflation only if the moneys are parked in investments that are likely to grow over time at a rate faster than inflation. This is the role of growth assets like equity. Over long periods of time, equity can deliver superior returns. However, there is also a risk of capital erosion.

Table 4.4

Future Value of Today's Investment



Growth assets should not be used to provide for liquidity needs, because, in the short term, there is risk of significant capital erosion; however, equity can be used to support long term financial goals of the investor, provided the investor is comfortable with the risk. Every investor needs to have a mix of liquid assets and growth assets in the portfolio.

The term to the goal changes every day and a long term financial goal becomes a short term goal as the time to the goal comes closer. Investments made for the goal have to be monitored and switched from growth assets to liquid assets so that the funds can be accessed when required. For XYZ, the financial goal of supporting the son's business in 5 years is long-term today. However, closer to the end of 5 years, it will become a liquidity need, calling for a switch to liquid investments. It is good to plan ahead for the switch and do it over a period of time so that there is some protection from the volatility seen in the value of growth assets. For example, if the investments are being held in equity shares, then they can be sold in tranches over six months to a year and the funds moved to a short-term investment. Redeeming the investment fully at one point runs the risk of prices being low at that point, and therefore a lower corpus value. Doing it over a period of time will protect the investment from this risk, since low prices for some tranches will be offset by higher prices for others.

4.6. Prioritising Financial Goals

As part of the relationship, the investment advisor needs to understand the various financial goals of the client. The multiple goals have all to be met out of the resources of the individual. Goals have to be realistic given the income and expenses of the client and their

ability to save. The advisor may have to provide inputs on the financial goals, especially if the client is financially constrained. The advice may be on the following lines:

4.6.1 Ensuring adequate focus on important goals

Goals such as retirement and education of children are important financial goals for which adequate provision of funds have to be made. Long-term goals such as retirement often get lower priority for allocation of savings because it has time on its side. The urgent, shorter-term goals often get higher claim on the available savings. While this may be acceptable for shorter-term goals that are also important, such as accumulating funds for down payment on a home, it may not be right to prioritize consumption goals, such as holidays and large purchases, over long-term important goals. The delay in saving for such goals will affect the final corpus, since it loses the longer saving and earning benefits including that of compounding.

Clients often believe that the provident fund, superannuation and gratuity corpus they will receive on retirement will be adequate to ensure a comfortable living during the retirement years. In many cases, it turns out to be inadequate. Therefore, every client needs a retirement plan.

The advisor needs to go through the numbers and demonstrate the inadequacy. This will become clear with the cases on comprehensive financial planning, discussed later in this Workbook. The objective is to ensure that the client saves enough during the earning years for a comfortable retired life.

4.6.2 Differentiating between consumption expenditure and investment expenditure

Many clients have an endless list of lifestyle expenses. The advisor should be able to influence the client to be prudent in the expenditure. This can be done by highlighting how expenditure might affect the chances of the family being able to fulfil some other financial goal. The trade-offs should be clearly understood by the client.

Some outflows, like providing education to children, may appear to be consumption expenditure. But they may be a useful investment, if the children do well and are able to raise the family's income. Such expenditure needs to be prioritized. A budget that clearly demarcates mandatory and legal payments such as taxes, contributions to provident fund and gratuity and loan commitments, essential living expenses such as food and shelter and discretionary expenses such as lifestyle expenses, will help allocate income better between current and future needs. Allocate savings for goals before considering the discretionary expenses. This will make sure that the future needs are taken care of. SIPs, especially when automatically transferred from the salary, help in prioritizing the investment expenditure.

4.6.3 Identifying the holes in the household budget

A household may not be managing its income and expenses efficiently to enable savings for goals. Some common errors that make it seem as if savings are not possible include not being clear if an expense is an essential living expense or discretionary in nature, incorrect (higher) allocation for expenses, not 'paying self' before allocating for discretionary expenses, not tracking expenses regularly and hence going over-budget, among others. Very often, clients do not realise how much money goes in various avoidable expenses. The adviser should inculcate the habit in the client, to note down all expenses above a level. The limit may be Rs 500 for some clients; Rs 5,000 for some others. It would depend on the income level of the client.

A summarisation of the list of expenses at the end of the month can be enlightening, even for the client. For example, the amount that went in eating out or entertainment. When the client recognises the scale of the last opportunity to save, there is better likelihood of prudence in future. An adviser's primary role is to identify and eliminate these lacunae that inhibit savings.

4.6.4 Allocation to various categories of expenses

The monthly summary of outflows helps in understanding the current prioritization. If unusual expenses are kept out (for instance, a hospitalization that was not covered by insurance), the balance outflows can be categorized as mandatory contributions to provident fund and other retirement savings, loan servicing, essential expenses and lifestyle expenses.

Families vary in their financial circumstances. The advisor should work with the family in setting limits on various categories of outflows. A useful thumb rule is to ensure at least 20% goes into investments / retirement savings and loan servicing does not exceed 40% of income. The household can make additional savings possible by changing their choices on the expenses they incur. Essential expenses does not lend itself to much reduction but lifestyle expenses can be controlled to a large extent. Considering the alternate use to which the income can be used instead of spending it on discretionary expenses is one way in which such expenses can be controlled.

4.6.5 Staggering the timing of certain goals

The financial situation of an individual may not allow all the financial goals to be provided for. It may become necessary to prioritize goals. Goals are prioritized on the basis of their importance to the individual's financial wellbeing. Other financial goals may have to be deferred to ensure that the critical financial goal is not compromised. For instance, around the time that the family proposes to buy a house, the annual holiday may need to be reviewed. The holiday may be shorter or planned at a less expensive location.

Some financial goals need to be fulfilled within a specified time frame. For instance, education of the child has to happen as per the normal age and progression. Prudent use of debt in the form of loans can be used to tide over any shortage of funds.

4.6.6 Windfalls

Clients occasionally earn a windfall such as unexpectedly high annual bonus, inheritance, winning a lottery, etc. A healthy portion of such unexpected income should be set apart for the future, since the family is used to living without that windfall. These are also situations to take a look at the outstanding loans and consider pre-paying some of them.

Windfall gain need not be invested immediately, as appropriate investment opportunities may not be available at the time gain occurs. The gain may be held in risk free liquid assets, till investment decision is reached.

4.7. Risk Profiling

The funds allocated to various goals are invested in different investment avenues. Different investment products have various levels of inherent risk. Similarly, there are differences between investors with respect to the levels of risk they are comfortable with (risk appetite). At times there are also differences between the level of risk the investors think they are comfortable with, and the level of risk they ought to be comfortable with.

Risk profiling is an approach to understand the risk appetite of investors. This is an essential pre-requisite to advise investors on their investments. The investment advice is dependent on understanding both aspects of risk:

- Risk appetite of the investor
- Risk level of the investment options being considered.

Some of the factors and their influence on risk appetite are given in Table 4.5.

Table 4.5

Factors affecting risk appetite

Factor	Influence on Risk Appetite
Family Information	
• Earning Members	Risk appetite increases as the number of earning members increases

Factor	Influence on Risk Appetite
• Dependent Members	Risk appetite decreases as the number of dependent members increases
• Life expectancy	Risk appetite is higher when life expectancy is longer
Personal Information	
Age	Lower the age, higher the risk that can be taken
Employability	Well qualified and multi-skilled professionals can afford to take more risk
Nature of Job	Those with steady jobs are better positioned to take risk
Knowledge about markets	A person who is better informed about markets is in a better position to take market risks, than someone who is ignorant about them.
Psyche	Daring and adventurous people are better positioned mentally, to accept the downsides that come with risk
Financial Information	
Capital base	Higher the capital base, better the ability to financially take the downsides that come with risk
Regularity of Income	People earning regular income can take more risk than those with unpredictable income streams

More such factors can be added. The investment advisor needs to judge the investor's ability to take risk based on such factors, rather than just ask a question "How much risk are you prepared to take?"

Further, the adviser has to consider the investment horizon. If the investor's goals are mostly short-term, then risk investments may not be suitable.

The investor's willingness to take risk may be in variance to the ability to take risk and earn better returns. Investors who refuse to consider the better returns from growth investments

such as equity even for their very long term goals such as retirement, is a case to point. The willingness to take risks depends upon their knowledge and comfort with investments and their recent experiences.

Some risk profiling tools are available in websites. These typically revolve around investors answering a few questions, based on which the risk appetite score gets generated.

Some of these risk profile surveys suffer from the investor trying to "guess" the right answer, when in fact there is no right answer. Risk profiling is a tool that can help the investor; it loses meaning if the investor is not truthful in his answers.

Some advanced risk profilers are built on the responses to different scenarios that are presented before the investor. Service providers can assess risk profile based on actual transaction record of their regular clients.

While such tools are useful pointers, it is important to understand the robustness of such tools before using them in the practical world. Some of the tools featured in websites have their limitations. The investment advisor needs to use them judiciously.

4.8. Asset Allocation

'Don't put all your eggs in one basket' is an old proverb. It equally applies to investments.

The discussions earlier in this Workbook highlighted how the risk and return in various asset classes (equity, debt, gold, real estate and others) are driven by different factors. This implies that return from asset classes at any point in time will not be the same in direction or magnitude but will vary depending upon the impact of the prevalent economic conditions on their performance. For example, during the recessionary situation in 2007-09, equity markets in many countries fared poorly, but gold prices went up. Thus, an investor who had invested in both gold and equity earned better returns than an investor who invested in only equities. The distribution of an investor's portfolio between different asset classes is called asset allocation. An efficient asset allocation is one which includes asset classes that have low or negative correlation so that the returns from the investments do not rise and fall together. Being invested in multiple asset classes allows the portfolio to benefit from the higher returns of the asset class which finds the prevalent economic conditions favourable to their performance, and reduce the risk of the being invested only in an asset class that has performed poorly.

Some international researches suggest that asset allocation and investment policy can better explain portfolio performance, as compared to selection of securities within an asset class (stock selection).

Three types of asset allocation are often referred to viz. Strategic, Tactical and Dynamic Asset Allocation.

Strategic Asset Allocation is allocation aligned to the financial goals of the individual. It considers the returns required from the portfolio to achieve the goals, given the time horizon available for the corpus to be created and the risk profile of the individual.

Profiling the investor with regard to their ability to take risks, need for growth, income or capital protection, and investment horizon is done using questionaires and other tools to determine the optimal allocation between growth-oriented and income-oriented assets.

Strategic asset allocation is a long term plan that is reviewed periodically for continued relevance to the individual's goals or situation. A change in these fundamentals may alone trigger a change in the allocation. The allocation to an asset class will not be increased on the basis of expected performance of the asset class. This implies that while the portfolio is protected from errors in asset performance forecast, at the same time the portfolio will not benefit from a higher exposure to an asset class that is performing well. The portfolio will be rebalanced periodically so that the allocations to various asset classes that may have changed over time due to their performance, is brought back to what was originally envisaged.

Tactical Asset Allocation is the decision that comes out of calls on the likely behaviour of the market. An investor who decides to go overweight on equities i.e. take higher exposure to equities, because of expectations of buoyancy in industry and share markets, is taking a tactical asset allocation call.

Tactical asset allocation is suitable only for seasoned investors operating with large investible surpluses. Even such investors might like to set a limit to the size of the portfolio on which they would take frequent tactical asset allocation calls. The major portion of the portfolio would be aligned to a strategic asset allocation.

Dynamic Asset Allocation uses pre-defined models to allocate assets among different asset classes. Triggers for reallocation may be defined in terms of asset class valuations or portfolio performance. Dynamic asset allocation removes the subjective element from asset allocation decisions.

4.9. Model Portfolios[5]

Since investors' requirement from their investments vary, a single portfolio cannot be suggested for all. Investment advisers often work with model portfolios – the asset allocation mix that is most appropriate for different investment objectives, return expectations, risk appetite levels and liquidity needs. The list of model portfolios, for example, might read something like this:

4.9.1 Young call center / BPO employee with no dependents

50% diversified equity schemes (preferably through SIP); 20% sector funds; 10% gold ETF, 10% diversified debt fund / fixed deposits, 10% short-term debt funds and liquid schemes / savings bank account / current account.

4.9.2 Young married single income family with two school going kids

35% diversified equity schemes; 10% sector funds; 15% gold ETF, 30% diversified debt fund / fixed deposits, 10% liquid schemes and short-term debt funds / savings bank account / current account.

4.9.3 Single income family with grown up children who are yet to settle down

35% diversified equity schemes; 15% gold ETF, 10% gilt fund, 20% diversified debt fund / fixed deposits, 20% short-term debt funds, liquid schemes / savings bank account / current account.

4.9.4 Couple in their seventies, with no immediate family support

15% diversified equity index scheme; 5% gold ETF, 35% debt oriented hybrid fund/MIS/SCSS, 30% diversified debt fund / fixed deposits, 15% liquid schemes / savings bank account / current account.

As the reader would appreciate, these percentages are illustrative and highly subjective. The critical point is that the investment adviser should have a model portfolio for every distinct client profile. This can then be tweaked around based on specific investor information.

Thus, a couple in their seventies, with no immediate family support **but very sound physically and mentally, and a large investible corpus** might be advised the following portfolio, as compared with the previous model portfolio:

[5] The asset allocations given here are for education purposes. Please take professional advice on the allocation that is most suitable for you.

10% diversified equity scheme; 15% diversified equity index scheme; 10% gold ETF, 30% debt-oriented hybrid fund, 25% diversified debt fund / fixed deposits, 10% liquid schemes / savings bank account / current account.

4.10. Fundamental Principles of Insurance

Insurance is a unique form of a contract which enables the transfer of risk from one party (the insured) to another party (the insurer). Given the unique circumstances, there are two fundamental principles:

4.10.1 Utmost good faith (Uberrimae Fidei)

Since the insured party is better informed about himself or herself than the insurer, there is an information asymmetry between the two parties.

The party that has less information i.e. insurer therefore imposes certain screening processes before entering into the contract. Medical test is a typical screening process. However, medical test has its limitation. It does not reveal all ailments or the family history. Therefore, the insurer agrees to enter into the insurance contract based on utmost good faith in the insured.

The obligation is on the insured to disclose all relevant information truthfully. Family history of medical conditions, medical history of the insured, habits regarding smoking and drinking, nature of the profession etc. have implications on risk perception. These need to be disclosed by the insured before getting covered by the insurer. If this is not done, the insured is said to have acted in breach of good faith.

At times, the insured do not reveal the relevant information. On that basis, the insurance policy may be issued. However, when a claim comes up, investigation by the insurer may throw up the facts about the information that was suppressed. Based on that, the insurer has the right to reject the claim entirely.

It is therefore in the interest of the insured to share all material information. What is material can be subjective. Anything that can influence the insurer's risk perception on the insured is material. When in doubt, it is safer for the insured to reveal the information, rather than suppress it.

4.10.2 Insurable interest

The insurer will cover the risk only if the insured has an insurable interest in the subject matter of insurance. The test of insurable interest is that the insured should be better off if the risk does not materialise, but will be adversely affected if the risk materialises.

For example, a businessman has insurable interest on his inventory, but not in the inventory of a competitor. Family members have insurable interest in each other. Lender has insurable interest in the borrower to the extent of the amount outstanding. Employers have insurable interest in their key employees.

4.11. Role of Insurance Advisor

The insurance advisor performs an important role in protecting the client from insurable risks. Broadly, the following are the steps in insurance planning:

4.11.1 Identify the insurance need.

Insurance needs vary with people and situations. These can be categorised as follows:

- **Income replacement need**

This is the need to cover risk to the life or earning ability of an asset, which includes the life of an individual as an asset generating income. Life insurance, insurance for the maintenance and replacement of plant and machinery, annuities, are all examples of insurance products that serve this need.

- **Income protection need**

This is the need to protect the available income from an unexpected charge. Health insurance and motor insurance are examples of insurance products that cover such risks.

- **Asset protection needs**

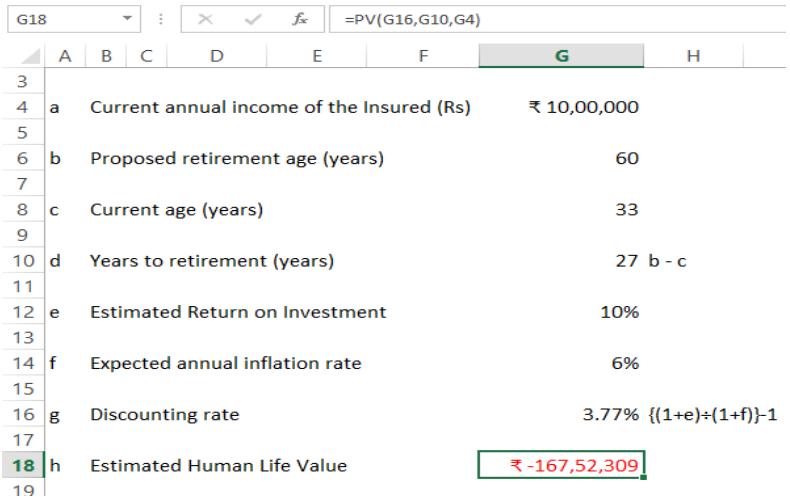
Here, the need is to protect assets created. Insurance against theft or destruction of goods is an example of insurance product that covers the risk.

4.11.2 Estimate the insurance coverage

Life insurance is peculiar because of the subjectivity involved. What is the value of a human being? Life insurance is about replacing the monetary benefit that an individual provides to their family during their lifetime. This is the income that would have been available to meet their expenses and goals. Insurers have their techniques for estimating human life value. One simple approach is given in Table 4.6.

Table 4.6

Estimating Human Life Value



3				
4	a	Current annual income of the Insured (Rs)	₹ 10,00,000	
5				
6	b	Proposed retirement age (years)	60	
7				
8	c	Current age (years)	33	
9				
10	d	Years to retirement (years)	27	b - c
11				
12	e	Estimated Return on Investment	10%	
13				
14	f	Expected annual inflation rate	6%	
15				
16	g	Discounting rate	3.77%	{(1+e)÷(1+f)}-1
17				
18	h	Estimated Human Life Value	₹ -167,52,309	
19				

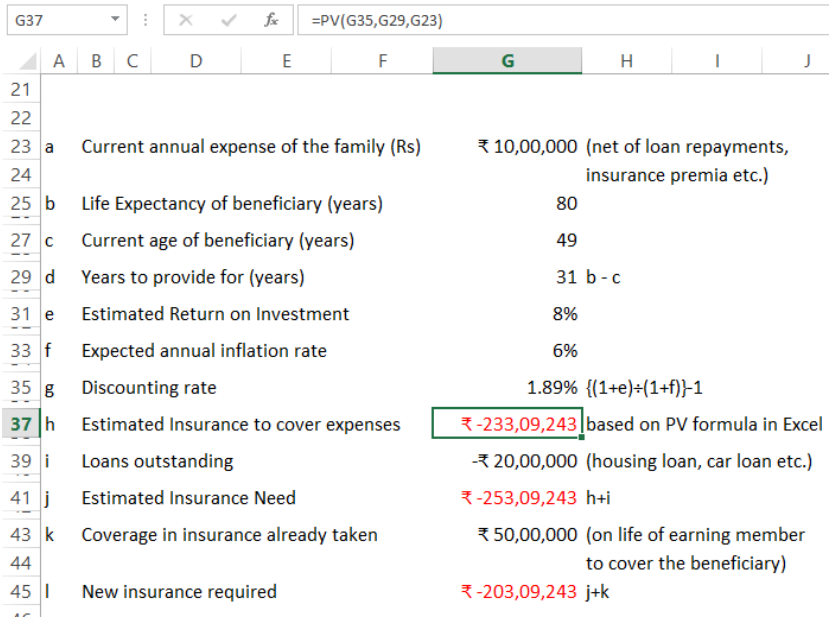
Note: The discounting rate shown in the table is only upto 2 decimals. The calculations are based on the formula given in the table, whose result goes into several more decimals.

The HLV calculations consider the inflation rate as the rate at which the income would have gone up each year. The return on investment is considered to calculate the return that the corpus would earn in the event the insured dies and the sum assured is paid out.

An alternative approach goes based on the expenditure needs and liabilities of the insured, as illustrated in Table 4.7.Along with the value of insurance already taken, the value of investments and other assets (other than one residential house) that the person already owns is also to be subtracted, while calculating the new insurance requirement.

Table 4.7

Estimating Insurance Need



21				
22				
23	a	Current annual expense of the family (Rs)	₹ 10,00,000	(net of loan repayments,
24				insurance premia etc.)
25	b	Life Expectancy of beneficiary (years)	80	
27	c	Current age of beneficiary (years)	49	
29	d	Years to provide for (years)	31	b - c
31	e	Estimated Return on Investment	8%	
33	f	Expected annual inflation rate	6%	
35	g	Discounting rate	1.89%	{(1+e)÷(1+f)}-1
37	h	Estimated Insurance to cover expenses	₹ -233,09,243	based on PV formula in Excel
39	i	Loans outstanding	-₹ 20,00,000	(housing loan, car loan etc.)
41	j	Estimated Insurance Need	₹ -253,09,243	h+i
43	k	Coverage in insurance already taken	₹ 50,00,000	(on life of earning member
44				to cover the beneficiary)
45	l	New insurance required	₹ -203,09,243	j+k

Note: The discounting rate shown in the table is only upto 2 decimals. The calculations are based on the formula given in the table, whose result goes into several more decimals.

4.11.3 Identify the most suitable insurance product

Having decided on the insurance coverage, the next decision is the choice of product. Various types of insurance products are discussed in the next section.

4.11.4 Optimise the insurance premium

Within the same insurance product and coverage, there are choices that help the insured reduce the insurance premium.

For example, in motor insurance, it is common to ask for non-mandatory information relating to the insured that help in understanding the risk better. Insurance policy will be issued even if the additional information is not shared; but the insured can reduce the premium by sharing the information.

Another avenue for reducing premium in the case of non-life policies is in the choice of 'deductible'. The insured can agree that in the event of a claim, a certain amount (the deductible) will be borne by the insured. Thus, the insured is sharing the risk with the insurer. This is compensated through a lower insurance premium. Higher the deductible that the insured is prepared for, lower the insurance premium. The 'no claim' bonus can be used to reduce premiums in the following years.

The advisor can help the insured optimise on the insurance premium through such measures.

4.11.5 Monitor the insurance coverage

Insurance is not a one-time activity. The exposure and coverage need to be monitored continuously. Where necessary, the policy coverage would need to be modified to mitigate additional risks. Reviewing insurance cover is advised whenever there is a big change in life which alters the demands on your income. Marriage, children, buying a house and even a large raise, are situations that require a review of the adequacy of the insurance cover. Life insurance cover may even be reduced over time as goals are met and there are fewer goals to be provided for.

4.12. Life Insurance Products

Life Insurance products can be distinguished on the basis of the terms on which they provide benefits to the insured and the nature of the benefits. Products are broadly classified as Traditional policies, Unit linked policies and Variable insurance products

Traditional products include term insurance, endowment policies and whole life policies.

4.12.1 Term insurance

This is a pure risk policy. Insurance premium is lowest for such policies, because there is no savings component in the policy i.e. at the end of the insurance period, if no claim has been made, nothing can be recovered from the policy. The low cost enables taking insurance to the level required to protect the goals and needs of the individual. And in the event of death of the insured, it eliminates the risk of not being able to meet goals on account of being under-insured. The individual has to make separate provisions for saving for the goals since there is no payout from the policy if the insured survives the term of the policy.

During the period of insurance, in the event of death of the assured, the sum assured will be paid to the beneficiaries. An approach that is often adopted is to have a term insurance for each major financial goal. Once a financial goal is fulfilled, the term insurance for that goal becomes redundant and it is allowed to lapse without any cost or charge. The risk to this approach is that taking insurance later in life becomes expensive. If there is a new goal or the need to extend insurance cover beyond the earlier estimated term, it may come at a higher cost.

There are variants to the term insurance policy, which provide for return of some of the premium paid. However, the insurance premium would be higher.

4.12.2 Endowment

These are for a fixed term of 5 to 30 years. They have a savings component. Therefore, if the insured survives the policy, the sum assured along with accrued bonuses will be paid back to the insured. In the event of death of the insured, the sum assured along with accrued bonuses will be paid to the beneficiaries. The savings feature increases the insurance premium on such policies.

Money-back policies are a variant of endowment policies. The insured is paid back agreed amounts on survival at specified points in time. Thus, the insured does not need to wait till the end of the insurance period to receive any survival benefits. In the event of death of the insured, the sum assured is paid to the beneficiaries. Insurance premium is higher on money-back policies as compared to traditional endowment policies. The nature of

investments made is not disclosed, and the returns from the investment component is very low

Endowment policies are also offered without the benefit of bonus. Premium would be lower in such policies.

Money-back policies can be used to fund requirements that occur after a defined period, such as college fees or even marriage. But the low return on these policies make them inefficient investment vehicle for goals. If the individual has the discipline to save and invest regularly for goals, without the forced savings imposed by insurance, then it may be more efficient to choose other options.

4.12.3 Whole Life

These policies offer cover for the entire life of the insured, for a fixed premium payable during the entire coverage period. On death of the insured, the sum assured is paid to the beneficiaries. The premiums are typically higher since a death benefit is a certainty.

There are variants where the premium is payable only for a specified period. Similarly, variants provide for some return of premium during the life of the insured.

A whole life policy may be considered by people who may have goals that extend much later into their lives, when renewing a term insurance may be very expensive. Taking a whole life early policy early may cost less. It may also be used in retirement planning to provide for a spouse, if the retiral income is expected to significantly reduce or cease on the death of the pensioner. Whole-life policies are particularly good for building an estate for the heirs. The tax-free nature of the death benefits from the policy is an advantage to consider.

4.12.4 Unit-Linked Insurance

In the case of both whole life and endowment policies, the insured has no say in deciding how the savings component in the policy will be managed. Unit-linked insurance policies allow the insured to decide on the kind of portfolio (mix of asset classes, such as debt and equity) that the insurer should maintain for the savings portion.

The risk cover charges are deducted from the regular premium paid by the insured during the period of insurance. The balance is invested as per the agreed asset allocation. The value of the investment portfolio (savings portion) will keep changing in line with the market. The insurer announces a Net Asset Value from time to time.

In the event of death of the insured, the sum assured (or net asset value or higher of both or total of both, depending on structure of the policy) is paid to the beneficiaries. If the insured survives the insurance period, then the net asset value is returned.

Single premium policies allow the insured to pay a one-time premium for the coverage.

The investment element in ULIPs can be used to save and invest for goals with longer tenors, after considering the costs and holding periods required.

4.12.5 Variable Insurance products

Variable Insurance Products are products that combine insurance and investment but are not unit-linked. The premium paid will have a component for risk cover and another portion which is the investment component which is credited to a policy account. Each policy will have a policy account and it will hold the accruals due to the policy. All VIPs will define a minimum floor rate of return for the policy. Additional return, over and above the floor rate, will depend upon the type of policy. If it is a linked policy then the additional return will be linked to the performance of an index or benchmark. Non-linked VIPs will have additional returns in the form of bonus in case of participating policies or additional interest in case of non-participating policies. The VIP shall provide a death benefit equivalent to the sum assured plus the balance in the policy account or the higher of the sum assured and balance in the policy account. The minimum maturity benefit shall be equivalent to the balance in the policy account at the guaranteed rate of return and additional returns as specified. The minimum policy term is five years and policies have a lock-in period of five year. The policy can be surrendered and the balance in the policy account of a surrendered policy is paid out after the lock-in period.

4.12.6 Mortgage Insurance

This is a special kind of insurance policy, where the sum assured keeps going down with time. This is suitable when the insurance policy is taken to cover a housing loan, which will keep reducing with loan repayments.

If the insured seeks a policy for the entire amount borrowed, then there will over-insurance viz. insurance amount will be greater than the loan outstanding after repayments. By balancing the over-insurance, the insured is able to optimise premium costs.

While the above are the typical insurance structures, they may be sold as serving various life-cycle needs such as children's education, retirement planning, investment planning etc. The structure can be modified to meet the specific life-cycle need.

Insurance companies also offer various riders that the insured can benefit from, by paying an extra premium.

- Double sum assured rider, which provides twice the amount insured in case of death before the term of the policy.

- Critical illness rider, which provides a sum that could be double the sum assured on diagnosis of a life-threatening illness.
- Accident or disability rider, which enables the insured to receive a periodic payout if temporarily disabled, for a limited period of time.
- Waiver of premium rider, which is triggered if there is a disability or loss of income that makes it difficult to pay the premium.
- Guaranteed insurability option rider, which enables enhancing the insurance cover without further medical examination

Group insurance is another option for cheaper insurance. For example, the insurance company may cover all employees of a company under a group insurance policy. The premium in that case turns out to be lower than for individual policy offering the same coverage. Further, the claim processing may be simpler, with the employer facilitating the process.

4.13. Non-Life Insurance Products

Insurance is a tool to protect the income of the household from a sudden, large expense that can derail the finances. A big medical expense, an accident that warrants large expenses on repairs or replacement of assets or even affects the ability to earn, are all situations that can be managed with insurance. A range of general insurance products are available for different exigencies. Insurance policies may offer different features for a cost. It is important to assess the individual's specific needs and any available cover before buying additional insurance.

4.13.1 Health insurance

This covers the insured for medical expenses. Family health policies provide the benefit of covering every identified member of the family under the same policy.

Within the sum assured, separate limits may be set for hospitalization, domiciliary treatment etc. Generally, claims can be made only in the case of hospitalization for at least one day.

Pre-existing illnesses are excluded, or will be covered only after a specified waiting period is over. Similarly, treatments such as dental, beauty and pregnancy are not covered. Eye operations are covered, but not cost of spectacles.

4.13.2 Personal accident insurance

This covers the insured in the case of any accidents. Besides the medical costs for treatment, the salary lost on account of the injury may also be covered. The compensation depends on nature of disability caused (total or partial) and extent of disability (temporary or permanent).

4.13.3 Travel insurance

The cover in such policies would be for baggage lost or delayed, loss of documents, medical costs during such travel and death-related costs, as will be detailed in the policy document.

4.13.4 Motor Insurance

Third party insurance viz. insurance to cover people affected by motor accidents is compulsory under law. Comprehensive insurance covers the cost of the car and its accessories. Insurers have their schedules of coverage and premium, depending on the age and model of the car.

4.13.5 Property insurance

This covers loss to property arising out of fire, theft, water etc. House, factory, domestic goods, factory equipment etc. can be covered through such policies.

Losses arising out of terrorism related incidents may not be covered, unless specifically included in the policy.

4.13.6 Fidelity insurance

This protects employers against losses caused by infidelity of their employees

4.13.7 Directors and Officers insurance

Directors and officers are exposed to various personal claims arising out of their employment. For instance, a subordinate may sue for victimisation or harassment or a customer may sue for losses arising out of a decision taken by the employee on behalf of the employer. Directors and Officers insurance policy protects representatives of the company from losses arising out of such claims.

4.13.8 Key man insurance

This is a protection for the company against losses arising out of death of a key person associated with the company.

While the above are general descriptions of the nature of cover offered in various types of policies, every policy is different. The insured and the advisor should go through the policy

document to understand fully, what is covered, what is not covered, and the circumstances in which claims can be made or cannot be made.

4.14. Retirement Planning

The two relatively long phases in the financial life of people are the accumulation and distribution phase. Accumulation phase is the earning years of a person's life, when a person accumulates savings. Distribution phase is the retirement years, when some of the savings will fund the living expenses. An issue that bothers most clients is the corpus required for a comfortable retired life. This depends inter alia on the following aspects:

4.14.1 Amount required in each month of retired life

This is determined either as a percentage of current income, or as a percentage of current expenses. Likely savings in some expenditure (such as travel costs) and likely increases in some other items (such as healthcare costs) need to be considered. Accordingly, an amount is determined. Let us say it is Rs 40,000 p.m.

4.14.2 Nature of retirement benefits available

Some clients would have the benefit of pension from their employers. In that case, the advisor needs to understand if it is inflation indexed. If there are no concerns regarding the pension materialising, then the expected pension can be reduced from the amount required in each month. Let us assume here, that no pension is available.

4.14.3 Inflation rate

This varies from year to year. For the purpose of planning, a single long-term rate is to be considered. Suppose it is 7% p.a.

4.14.4 Number of years to retirement

How many years down the line does the person expect to retire? If current age is 30, and targeted retirement age is 58, then retirement is 28 years away.

4.14.5 Number of retirement years to provide for

The retirement should plan for the life-time of both partners – a longer period in case of concerns regarding earning potential of the next generation. The rising life expectancy of people needs to be factored. Suppose it is decided to provide for 25 years.

4.14.6 Likely rate of return on investment of retirement corpus

On retirement, the person may not be able to take too much risk. Therefore, the return expectations need to be kept at a reasonable level. Let us say it is 8%.

The calculation of the retirement corpus required, based on the above assumptions, is shown in Table 4.8.

Once the client knows the requirement, the next question is the annual savings required to achieve the corpus. The calculation is shown in Table 4.9.

Readers are advised to refer to the Workbook for NISM-Series-X-A: Investment Adviser Level 1 Certification Examination for some other aspects of Retirement Planning and Estate Planning).

Table 4.8

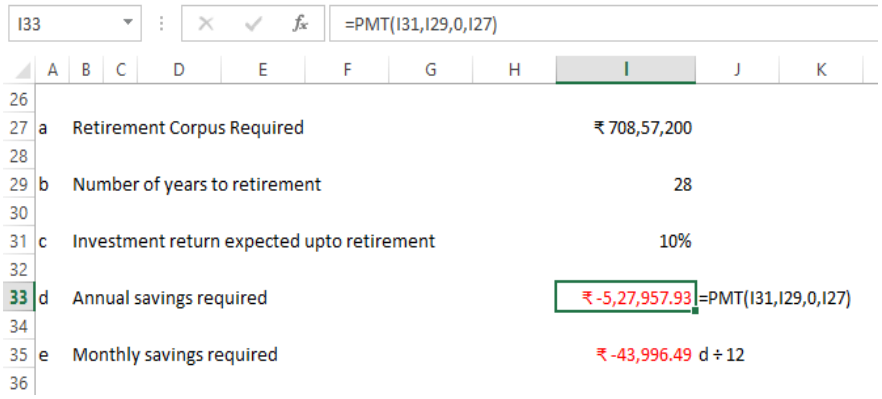
Calculation of retirement corpus required

I23 =PV(I21,I15,I17)

a	Monthly income required in retirement years	₹ 40,000			
b	Pension expected	0			
c	Monthly income to provide for in retirement years	₹ 40,000	a - b		
d	Annual income to provide for in retirement years	₹ 4,80,000	c X 12		
d	Inflation rate to assume	7%			
e	Number of years to retirement	28			
f	Number of retirement years to provide for	25			
f	Annual income required immediately after retirement	₹ 31,91,442	=I9*(1+I11)^I13		
g	Post-retirement investment return	8%			
h	Discount factor for retirement years	0.93%	(1+g)÷(1+d)-1		
i	Retirement Corpus Required	₹ -708,57,200	=PV(I21,I15,I17)		

Table 4.9

Annual savings to achieve the retirement corpus



4.15. Philanthropy

The world over, more and more people are getting philanthropic i.e. they want to devote time and / or money for larger social good. Earlier, the approach was to set apart some money in their Will for philanthropic purposes. Increasingly, people want to give away part of their wealth during their life time and see the positive change around them. Thus, philanthropy is becoming a part of everyone's life.

Some people, who wish to give away a part of their wealth, set up dedicated trusts for specific social objectives such as promotion of education, healthcare or culture. This is a format where the philanthropist is taking greater ownership for the activity. As sponsor, the philanthropist will appoint one or more trustees who will manage the affairs of the trust. The overall charter of the trust viz. what it will do and will not do, how the trust will take decisions, how trustees will be appointed or changed etc. are incorporated in the trust deed.

An alternate format is to donate money (or time) to some other social institution which is already engaged in the activity. The philanthropist, in this case, chooses to leverage on some other existing institution, rather than create another institution. Even in this format, the philanthropist can put conditions on how the donation will be used.

This alternate format is particularly suited for people with smaller amounts to donate. The cost, time and effort that would otherwise go in establishing and running another institution can be better channelled to the beneficiaries through an existing institution.

In the case of regular donations during one's lifetime, the approach that is often taken is to donate a portion of one's regular income or windfall gains. Some people sell some of their shares from time to time, and donate the proceeds to philanthropic activity.

Contribution to philanthropy through Will should be done in consultation with a lawyer. This will ensure that other beneficiaries do not make adverse claims and disrupt the philanthropy.

4.16. Comprehensive Financial Planning

Broadly, there are two approaches to financial planning viz. goal- specific planning and comprehensive financial planning.

In goal specific planning, each financial goal is looked at in isolation, and a dedicated investment plan is made to realise the financial goal.

Comprehensive financial planning takes a consolidated view of all the financial goals of the person. Accordingly, the investment plan too is a consolidated one – not a separate plan for each goal.

Comprehensive plans are particularly helpful when the client has several financial goals. A separate financial plan for each goal can make the financial planning process very cumbersome.

Another benefit of comprehensive plans is that the investment plan across all financial goals can be made keeping the client's strategic asset allocation in mind.

As part of the comprehensive financial planning, advisers not only plan for each financial goal of the person during the earning years, but also advise on retirement planning and estate planning. Thus, comprehensive financial planning becomes part of a deep relationship with the client.

Goal specific plan is a good format to start the client relationship. Over a period of time, the adviser should seek to graduate to make comprehensive financial plans for the client.

Cases of comprehensive financial plan are discussed in Chapter 7.

Sample Questions

1. EMI for a loan can be worked out using the _____ function in MS Excel.

a. PV
b. NPV
c. EMI
d. PMT

2. Which of the following depends on the market?

a. Strategic asset allocation
b. Tactical asset allocation
c. Investor risk profile
d. None of the above

3. Read the following caselet and answer the questions that follow:

Ms. T invests Rs 60,000 in a 10% yielding asset, using leverage of 1.4 times. Borrowing was at 9% p.a.

a. How much own funds did Ms. T invest?

i. Rs 35,000
ii. Rs 25,000
iii. Rs 42,857
iv. Rs 17,143

b. How much interest did Ms. T need to pay?

i. Rs 2,250
ii. Rs 5,400
iii. Rs 3,150
iv. Rs 3,500

c. What was Ms. T's net return?

i. Rs 6,000
ii. Rs 2,850
iii. Rs 3,750
iv. Rs 2,500

d. What was Ms. T's return on equity?

i. 1%
ii. 10.4%
iii. 10.9%
iv. 11.4%

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CHAPTER 5: PRODUCT ANALYSIS AND SELECTION

LEARNING OBJECTIVES:

After studying this chapter, you should know about:

- Concept of risk, return and portfolio construction
- Concept of return target, risk profiling and optimization
- Impact of market cycles and macroeconomic factors on various investment products
- Reviewing and evaluating mutual fund portfolios
- Behavioral biases in investment decision making

5.1. Risk, Return and Portfolio Construction

5.1.1 Return on Investment

When an investment is made, there is a cash outflow. When the investor earns income from the investment, or sells it, there are cash inflows. Typically investment is made in the present time, and inflows come in the future. Thus measuring return on investment involves comparing the capital outflow with the inflows from the investment. Returns on investment can be positive or negative. A negative return implies that the inflows from an investment fall short of the capital invested.

Some investments earn returns in the form of a regular income. Such returns flow in periodically, though the rupee value of returns may vary from one period to another. Dividend from shares, interest income received from bonds and deposits and rent earned on house property are examples of regular incomes earned from investments. For some investments, such as bank deposits, the interest payment, which is the regular return, is computed by applying the rate of return to the principal.

For marketable securities, such as bonds and equity, the investments tend to have a face value or par value that may be different from the principal invested. The regular return paid by the issuer is calculated by applying the rate on the face value, and not the principal value, or the price at which they are quoted in the market. Equity shares may have a face value of Rs. 10, Rs. 5, Rs. 2, or Re 1. Dividend is announced on a per share basis calculated as a percentage of face value. Bonds tend to have face values of Rs. 100, Rs. 1000 or Rs. 10000. Interest on bonds is quoted as a per cent per annum of the face value.

When market price is different from face value, the return is represented by yield. The yield depends on the purchase price (or market price) of the investment. The rate of dividend calculated on the market price of an equity share is called the dividend yield. For example, if

dividend per share is Rs 3 and shares are trading at Rs 20, the dividend yield is 3 X 100 ÷ 20 i.e. 15%.The interest income calculated on the market price of a bond is called its current yield. For example, if coupon is 8% and debentures of face value Rs 100 are trading at Rs. 102, the current yield is 8 X 100 ÷ 102 i.e. 7.84%.

The return to investors depends on the price that was paid to buy the share, mutual fund unit or bond. The face value is used only to determine the regular income component of the return, and is not the return itself. Investors often get misled with the announcement of high dividend rates assuming that to be the return on their investment. But 30% dividend is not equivalent to 30% return. It is simply a payout of Rs. 3 on a face value of Rs. 10. The higher the market price relative to the face value, the lower is the dividend yield for a given percentage of dividends declared.

Another type of return from an investment may be an appreciation or depreciation in its value that is not paid out to the investor. An appreciation in the price of gold, equity shares, or house property is an example of capital gains from investment. When there is depreciation in value over time, there is a capital loss.

The capital gain or loss may be realised or unrealised. A gain or loss is realised when an investment is sold. When the value of the investment has changed over time, but the investment is still being held, such gain or loss is said to be unrealised, or notional, until actual sale. For example, if a house is purchased for Rs. 15 lakhs, and sold for Rs. 25 lakhs, then there is a realized gain of Rs. 10 lakhs. However, if the investor finds out that his house is valued for Rs. 25 lakhs, but does not actually sell it, then he has an unrealised gain of Rs. 10 lakhs.

Unrealised gain is calculated by looking up current market value and comparing it with the original investment. If the market value of an investment changes frequently, the value of unrealized gain or loss also changes dynamically. If there is a liquid market, where current prices of an investment can be easily looked up, computing unrealised gain is easy. Otherwise, unrealised gain in an investment may only be an estimate.

Using the current market price to estimate the value of an investment is called 'marking to market' or MTM. MTM is an important idea in mutual funds, since the NAV at which units can be bought or sold is based on the current value of the investment portfolio. NAV includes realised investment income, realised capital gains or loss and unrealised capital gains or loss.

Unrealised gains can be measured only if the market price of the investment can be correctly determined and can be realised if an actual sale takes place. A liquid market is needed to do a fair MTM. It is difficult to determine fair market value of all investments. For instance, it may be easy to sell an equity share in the stock market. However, it would be

much harder to sell a house. There may not be willing buyers at the time we like to sell or the price may change by the time we manage to sell. If the sale happens only with a delay and after an impact on price the investment is considered to be illiquid. Unrealised gains or losses in the case of such investments are only estimates based on assumptions.

If an investment generates both types of return – regular income and capital gains – it is preferable to measure its total return. The total return earned on an investment includes regular income as well as changes in the value of the invested amount, whether realized or unrealized. Both components of return are compared to the principal amount invested to get the total return on an investment. The presence of two sources of return in the calculation of total return: regular income and from change in the value, does not always mean that the total return will be higher than the regular income. Take the example of a bond purchased at a face value of Rs. 100 and paying a coupon of 9%. The holder sells the bond after 2 years for Rs. 98. The returns earned by the investor over the two years are Rs. 18 (Rs. 9 + Rs. 9) from interest and a loss of Rs. 2 on sale. The total return is Rs. 16 (Rs. 18-Rs. 2) over the 2 years. The simple annual return on investment is Rs. 16/ Rs. 100*(1/2) = 8%, which is lower than the coupon rate of 9%.

Real estate contributes both growth and income to a portfolio and the total return from the investment comprises both rental income and capital appreciation. Rental yield is calculated as the annual rent divided by the market value of the property. Given the high capital values of real estate in India, rental yield tends to be low. The gain in the value of the property constitutes a greater portion of the return on investment from real estate. The high capital values combined with high cost of loans also implies that most real estate investments have negative cash flows for the investor in the initial period of investment. That is, the cash inflow in the form of rent earned on the property being lower than cash outflow on the property on account of home loan repayments, property taxes and maintenance. Over a period of time, as rents go up and loan repayments cease, the cash flow from the investment turns positive.

It is important to understand the primary source of return from an investment. An income-oriented investment provides most of its total return in the form of periodic inflows. There is limited scope for capital gains as the principal is usually returned on maturity. Bank deposits, corporate fixed deposits, monthly schemes of post offices and bonds are examples of income-oriented investments. On the other hand, a growth-oriented investment provides a small or zero regular return, but offers the benefit of capital gains over time. For example dividend yield from equity shares or rental yield from property may be low; but the extent of capital gains from growth in value of the investment can be high. Property, gold and equity are examples of growth-oriented investments.

5.1.2 Risk in Investments

Risk in investments refers to the possibility that the expected return from an investment or the capital invested may be eroded in some manner. The risk in investment is defined as the possibility that actual returns from the investment will be different from expected returns. Whenever there are returns, there will be risk; so all investments are exposed to risk to some extent. Risk refers to both positive and negative deviations of actual returns from expected returns.

To understand the risk in an investment, it is necessary to measure its actual and expected returns. The expected return is estimated depending on the type of investment product. For some investments, the expected return may simply be the returns defined by the investment provider. For example, an investor who puts money into a two-year bank deposit at a rate of 9.5% p.a. expects a return of 9.5% during the holding period of the deposit. The expected and actual returns are the same. Whatever is stated as the return is almost certain to be paid to the investor. Since the deviation between actual and expected returns is zero, such investments are considered to be of low-risk in nature. Examples of low-risk or no risk investments include fixed deposits of banks, government schemes, post office deposits, etc. While these investments are perceived as low risk or risk-free in terms of receiving the expected returns, they may have other risks, which are discussed later in this chapter.

For investments that are not associated with a fixed or stated return, expected return is estimated on the basis of the past performance of that product. For example, investments in mutual funds or equity shares do not have a pre-determined return, and investors tend to buy such products based on their returns in past years. Suppose an investor buys units of a mutual fund that has returned 15% over the past three years. The investor is likely to be influenced by the fund's performance record, and may expect this level of return to be replicated in the future. If the actual returns earned by the fund drop significantly from its past averages, then the investor will perceive the investment to be risky.

The Regulations require mutual funds to clearly indicate in their scheme information that "Past performance may or may not be sustained in future". This is to prevent investors from forming return expectations strictly on the basis of past performance.

Investments are subject to some risk or the other, only the nature and extent of risk may vary. Economic activities are exposed to differing risks:

- A business might find its market share shrinking due to competition
- A government may find borrowing costs coming down with a fall in inflation
- A company may find that the costs of its raw materials have moved up
- Exporters may earn less because of an appreciating currency.

Thus the risk to an investment depends on the use to which the money is put. The common types of risk that affect investments include inflation risk, default risk, reinvestment risk, call risk, marketability or liquidity risk, market or price risk. In order to minimize investment risk an investor needs to do the following:

- Identify the risks applicable to an investment
- Measure the risk
- Manage the risk appropriately

Risks in investments can be managed for each investment or at the portfolio level so that the impact on the overall financial situation of the investor is reduced.

Inflation Risk

Inflation refers to a general rise in prices of goods and services. Inflation reduces the purchasing power of money. This means that when there is high inflation, the same amount of money buys fewer goods and services. Inflation risk is the risk that the inflows from an investment may be worth much less when they have been adjusted for inflation.

The nominal value or return of an investment is the pre-inflation absolute value or return. Once adjusted for inflation, it is known as a real value or return. Inflation risk is the possibility of erosion in the real value of an investment.

Inflation risk is highest for fixed return instruments such as bonds and bank deposits. Such instruments pay a fixed periodic interest and return the principal amount on maturity. Both interest and principal are fixed in nominal terms and do not vary with inflation. Thus their inflation-adjusted or real values are affected by inflation.

Though it is common practice to simply deduct the inflation rate from the nominal rate to arrive at the real rate, a different approach may be used in financial planning. The formula used to compute real return is as follows:

Real return = ((1+nominal return) / (1+inflation rate)) -1

This formula assumes that the return is growing at a nominal rate and needs to be discounted by the inflation rate, to get the real return.

The higher the inflation, the greater the erosion in real values of fixed returns investments. Calculating inflation adjusted returns gives a better picture of the adequacy of the returns.

Returns from investments such as equity, real estate or gold adjust better to inflation. The increase in their value over time tends to move in line with or higher than inflation rates. They are less vulnerable to loss of value when prices rise and provide better protection against inflation risk.

Default Risk

Default risk, also known as credit risk, refers to the probability that borrowers could default on the commitment to pay interest and may not repay the principal on the due dates. Debt instruments are subject to default risk as they have pre-committed payouts. When investors buy a bond they lend to the issuer of the bond presuming that interest and principal as promised would be paid on the due dates. The failure by a borrower to honour the commitment to pay interest or principal or both, creates default risk for the investor.

Government or government-guaranteed borrowings are considered to be free of default risk. This is because sovereign government can meet payment obligations even during difficult times by imposing additional taxes, raising international borrowings or as a final resort, printing money to pay their dues. All borrowers other than the government face default risk.

The actual level of default risk faced on an investment depends on the financial situation of the borrower. Default risk can be assessed by tracking the credit rating of an investment. Credit rating agencies assign credit ratings after carrying out a detailed analysis of the issuer's financial ability to honour the payments on time. These ratings are in the form of alphanumeric symbols. Rating is given for an instrument and not to a firm; so two different instruments issued by the same firm can have different ratings. The higher the credit rating, the lower is the default risk.

SEBI has standardized the rating symbols used by the credit rating agencies so that investors are able to easily gauge the level of credit risk assigned to an instrument. The rating symbols and their definitions are reproduced below.

I. Rating Symbols and Definitions for Long Term Debt Instruments
Long term debt instruments: The instruments with original maturity exceeding one year
Rating symbols should have CRA's first name as prefix
AAA - Instruments with this rating are considered to have the highest degree of safety regarding timely servicing of financial obligations. Such instruments carry lowest credit risk.
AA - Instruments with this rating are considered to have high degree of safety regarding timely servicing of financial obligations. Such instruments carry very low credit risk.
A - Instruments with this rating are considered to have adequate degree of safety

regarding timely servicing of financial obligations. Such instruments carry low credit risk.
BBB - Instruments with this rating are considered to have moderate degree of safety regarding timely servicing of financial obligations. Such instruments carry moderate credit risk.
BB - Instruments with this rating are considered to have moderate risk of default regarding timely servicing of financial obligations.
B - Instruments with this rating are considered to have high risk of default regarding timely servicing of financial obligations.
C - Instruments with this rating are considered to have very high risk of default regarding timely servicing of financial obligations.
D - Instruments with this rating are in default or are expected to be in default soon.
***Modifiers {"+" (plus) / "-"(minus)} can be used with the rating symbols for the categories AA to C*. The modifiers reflect the comparative standing within the category.**

II. Rating Symbols and Definitions for Short Term Debt instruments
Short term debt instruments: The instruments with original maturity of upto one year
Rating symbols should have CRA's first name as prefix
A1 – Instruments with this rating are considered to have very strong degree of safety regarding timely payment of financial obligations. Such instruments carry lowest credit risk.
A2 - Instruments with this rating are considered to have strong degree of safety regarding timely payment of financial obligations. Such instruments carry low credit risk.
A3 - Instruments with this rating are considered to have moderate degree of safety regarding timely payment of financial obligations. Such instruments carry higher credit risk as compared to instruments rated in the two higher categories.
A4- Instruments with this rating are considered to have minimal degree of safety

regarding timely payment of financial obligations. Such instruments carry very high credit risk and are susceptible to default.
D - Instruments with this rating are in default or expected to be in default on maturity.
Modifier {"+" (plus)} can be used with the rating symbols for the categories A1 to A4. **The modifier reflects the comparative standing within the category.**

Source: SEBI

Reinvestment Risk

Re-investment risk is the risk of fall in the returns when cash flows from investments are reinvested. Since income received shall be invested at the prevailing rates, there is a possibility that these cash flows may be reinvested at a lower return as compared to the original investment.

For example, consider an investment in a bond with a maturity of 5 years and interest income at 12% per year. Each year Rs. 12 is received for every Rs. 100 invested. These cash flows have to be reinvested at the rates that are prevalent at the time they are received, so they may not earn 12%. The maturity proceeds or sale proceeds if the bond is sold before maturity have to be reinvested too. The reinvestment rates can be high or low, depending on the situation at that time. This is the reinvestment risk.

Some investments allow interest to accumulate and they also pay interest on the interest that is re-invested. Such options are a good choice for earning a compounded growth on an interest-paying instrument. For example, the interest earned on a PPF account is credited at the end of the financial year, but not paid out. The next year's interest is computed on the entire value, including the interest. PPF is however subject to reinvestment risk, too. This is because the rate of interest that will be paid on the balances is changed every year, based on the market rates.

While choosing the cumulative or reinvestment option in an investment, an investor must know the rate that will apply for reinvestment. That will enable assessing the reinvestment risk.

Call Risk

Debt instruments are often issued with an embedded call option in them which allows issuers to redeem the bond before maturity. Such investments are exposed to call risk. Call risk refers to the possibility that the issuer of a bond may choose to redeem it before

maturity. Early redemption brings down the tenor of the bond, and forces the investor to find alternate investments to invest the funds received.

Call risk is closely connected to re-investment risk. Issuers are likely to exercise the option to call a bond if interest rates fall. They will redeem the existing high cost bond and raise funds by issuing a new bond at a lower interest rate. The investor now has two risks. First, reinvestment of redemption proceeds requires that the investor redo his financial plans. Second, in an environment of falling rates, he will face reinvestment risk because funds will have to be invested at a lower rate.

Liquidity Risk

Liquidity or marketability refers to the ease with which an investment can be bought or sold in the market. A liquid investment can be sold quickly, at a fair price and low transaction cost. The absence of liquidity in an investment is a risk. Liquidity risk implies that the investor may not be able to sell his investment when desired, or it has to be sold below its fair value, or there are high costs to carrying out transactions.

There may be different reasons for an investment to be exposed to liquidity risk. Some investments traditionally have illiquid markets, because the markets are characterized by low volumes and high values. Investments in property and art belong to this category; as they are large value investments which cannot be easily converted to cash at a fair price. The market for corporate debt instruments for retail investors also suffers from lack of liquidity. Investors who want to sell a bond may not find a ready buyer. Even if there were a buyer, the price may be lower due to the lack of liquidity.

In some cases, liquidity risk is created by the issuer of a debt instrument to ensure that funds remain invested. Some instruments may have a minimum holding period or a lock-in period when no transactions will be allowed. For example, a bank may impose a penalty if a fixed deposit is broken and the proceeds are redeemed before maturity. Some mutual funds impose exit load for redemptions earlier than a minimum holding period.

Equity investments are generally not exposed to liquidity risks as much as fixed return investments because equity markets are deep and liquid. However, an equity share that cannot be sold because it does not trade frequently is also subject to liquidity risk.

Market or Price Risk

Market or price risk is the risk from adverse movements in the price of the investments. Investment options such as equity, bonds, mutual funds, ULIPs, gold and property are subject to market risks because their value depends on the current price in the market where they are traded. Investments such as bank deposits and saving schemes are not subject to market risks. The amount that an investor will realize is pre-specified in such

investments, and the issuer is liable to pay the amounts as promised (failure to do so is default risk, as we have already discussed above).

The value of traded investments such as equity, equity-linked products, bonds, gold and property change continuously in response to market conditions.

The price at which a new investor can buy a share or a bond from the market depends on the current market price. Therefore the value of the investment to investors changes as the price changes. This is market risk. As the market price changes, varying levels of unrealized gains and losses are created. Market risk is also called interest rate risk in case of bonds.

Multiple Risks in Investments

Every investment is subject to one kind of risk or the other. Some investments may be subject to more than one type of risk. Not all investors can bear all risks, nor are there rules about what risks can be borne by whom. For example, retired investors may worry the most about inflation risks and may be unwilling to take on market risks. Some investors may be willing to take on credit risk to be able to earn a higher rate of interest. Some investors may speculate on the impact of market risks on the prices of investments.

The impact of business cycles on demand and supply is the most important risk associated with real estate investments. Expansion in the economy with lower interest rates, higher income levels and greater optimism leads to greater demand and higher prices. Increased supply from new projects launched to meet higher demand combined with a slowing economy, higher interest rates all dampen demand and leads to a downturn in real estate investments. Other risks include selection risks associated with location since the drivers of both rentals and price may be different for different locations. Liquidity risks are high in real estate since selling the property at the perceived right price takes time. The lack of standardization in properties leads to valuation risks. Since properties differ in terms of location attributes, age, type and quality of construction, among others, it is not easy to compare property values even in the same area. Real estate investments are also subject to policy risks such as rent control, which may affect the returns from the investments. Other risks include vacancy risk, especially in commercial properties and risk of non-delivery or default, particularly seen in investments made in the pre-launch stage.

Investors should first be aware of the various risks they are exposed to and be sure whether they are able and willing to bear those risks. Young investors with limited wealth who speculate in stock markets may be willing to bear the market risks, but their limited wealth may reduce their ability to take large losses. Retired investors may be unwilling to bear market risks, but the need for fighting inflation may require them to invest a small portion in growth investments that feature market risks. This may be better than bearing higher default risk with the view to earn a higher interest income.

Measuring Risk

The market price of a liquid investment reflects its risk. If the investment is seen to be risky, its price will be volatile, moving up and down over time. So the presence of market prices over a period of time enables measuring risk and forming some expectations for return. Since most investors tend to form expectations on the basis of historical performance of an asset, it is common practice to represent expected returns by an average return. For example, suppose the annual return from equities is measured over the last 30 years, and the average return is found to be 15%. Then it could be said that a return of 15% is the expected return from equity investment. If the actual observed return for each year was different from 15%, there is risk in the investment.

The most common measure of risk is standard deviation. The standard deviation is the average deviation of actual returns from the average return over a time period. It is computed using a statistical formula. The larger the number of observations used to compute standard deviation, the greater is the reliability of the result.

Standard deviation measures the extent to which actual returns are scattered away from the average or expected return. The higher the standard deviation, the greater the dispersion of returns around the average, and so the higher the risk associated with the investment.

Standard deviation is computed on the basis of a historical returns series, and the same level of risk may not apply in the future. This is because risk is driven by a variety of factors and not all of them can be forecast accurately. Therefore standard deviation is best used as an indicative rather than a conclusive measure of risk in investment.

An important application of standard deviation is in forming future return expectations for an investment. Using the principles of the normal probability distribution, it has been found that about 95% of the times, the return from an investment will be in the range estimated as the average return, plus or minus twice the standard deviation. This applies to most market return series.

There are complex theoretical foundations to know how standard deviation and such estimations work. This simple illustration is to enable an adviser to use published return and standard deviation numbers to make rough estimates about what is the return to expect, and showcase to the investor the range in which returns could move, thereby highlighting the risks of the investment.

Systematic Risk

Standard deviation is a measure of the total risk of an investment. Total risk consists of two parts i.e. systematic risk and unsystematic risk. The part that affects the entire system is

known as systematic risk, and the part that can be diversified away is known as unsystematic risk.

Systematic risk refers to those risks that are applicable to the entire financial market or a wide range of investments. It is caused due to factors that affect the entire market and are not specific to a particular company or industry. Changes in government policy, inflation, interest rates, external factors, exchange rate movements, wars or natural calamities are some common systematic factors. For example, the 2008 global financial crisis reduced economic growth in India and pushed down prices of all stocks in the market.

Unsystematic risk is the type of uncertainty that is specific to the company or industry, an investor invests in. Unsystematic risk can be reduced through diversification. For example, sudden strike by the employees of a company, investor have shares in, is considered to be unsystematic risk. It is also known as specific risk or diversifiable risk.

If a portfolio is well diversified, then unsystematic risk is very small and systematic risk forms the most important component of risk in investment.

Beta measures the systematic risk in a stock by measuring the volatility in the price of a stock relative to the overall market:

- The market index is assumed to have a beta of 1.
- Stocks with a beta greater than one are likely to be riskier than the market.
- Stocks with beta less than one are less risky than the market.

The logic of this method is that if the price of a stock is more volatile than the market index itself, then it is more impacted by systematic risk than the average market. Such stocks tend to rise more than the market during a bull period and decline more than the market average during bearish periods.

A high beta is associated with riskier growth stocks. Equity stocks that move up quickly when the economy is doing well and decline rapidly during periods of low economic growth are known as cyclical stocks. A low beta is associated with defensive stocks. Defensive stocks belong to companies that are relatively insulated from economic cycles. Consumption of items of daily use and medicines is not likely to be affected by market cycles, but remain steady. Stocks from consumer goods, drugs and pharmaceuticals, health care sectors tend to feature low systematic risk.

5.1.3 Portfolio Construction Principles

Every investment option can be described in terms of its risk and return characteristics. Based on the type and level of return generated and type of risk faced, it is possible to group investment options into asset classes. An asset class is a set of investments with similar risk-

return features. The three main asset classes are equity, debt and cash and cash equivalents. However, as investment options have extended beyond capital market products, these basic categories have expanded to include commodities, real estate and currency.

Asset classes differ in their risk-return features.

- Equity is a growth-oriented, long-term investment. The major source of return from equity is capital appreciation over time.
- Debt is an income-oriented investment, which provides regular income to the investor. The scope for capital appreciation is limited in debt.
- Equity offers higher long-term returns as compared to debt, but in the short term its returns tend to be volatile.
- Cash and its equivalents are used to invest short-term surpluses and offer capital protection, but a low level of return.

Real estate, gold and other commodities are known as physical assets. Real estate offers the benefit of both regular income (through rental yields) as well as capital appreciation. Gold is a precious commodity usually purchased as a store of value in uncertain times. Gold has the reputation of being an inflation hedge as well as a safe investment free of credit or interest rate risk. Currency and derivatives are trading assets that offer short-term tactical returns.

The potential return from each asset class varies. Growth assets offer higher return, income assets lower returns, and cash equivalents the least return. Each asset class is subject to different risk factors:

- Equity investments are subject to market risks and business risks.
- Debt investments are vulnerable to inflation risk, credit risk, interest rate risk and re-investment risk.
- Cash and its equivalents are subject to the risk of inadequate returns and inflation risks.
- Commodities are subject to risks from changes to cycles of supply and demand.
- Real estate, gold and currency are primarily subject to the risk of economic cycles. Real estate suffers from selection risks and low liquidity which may affect its realizable value. The regular income from real estate investments in the form of rentals may be affected by an economic slowdown. Gold does not generate any periodic income and is a pure growth asset. Currency investments tend to be extremely volatile and are short-term in nature.

The holding period that is suitable for each asset class is also different. Cash equivalents are suitable for short-term holding periods, since they offer protection of capital. Growth assets are suitable for the long term, to enable benefitting from appreciation in value. Income assets are suitable for intermediate holding periods.

The primary reason for grouping investments under an asset class is to recognise the similarity in risk-return features. Within a broad asset class, there may be categories to differentiate further. Though all investments within an asset class are affected by the same set of risk factors, the response may vary to some extent. For example, if stock markets decline, prices of equity shares decline, but not to the same extent. Some stocks may experience a much higher price fall as compared to others. Equity could thus have sub-categories such as large cap stocks or mid-cap stocks which may show some differences in their performance. Debt as an asset class may be most impacted by expected changes in inflation, which in turn affect interest rates. But the credit risk in corporate bonds is higher than that for government bonds, which have no credit risk. Sub-categories within asset classes are groupings based on risk and return, within the broad asset class.

Benchmarks

The performance and core features of an asset class can be captured in a benchmark index. This enables investors to track the performance of an asset class over time. The creation of benchmark indices further confirms the categorisation and acceptance of an asset class among investors. An asset class benchmark provides the standards against which the performance of an investment in an asset class is measured. An ideal benchmark must reflect the features of the asset class and must be capable of being replicated by the investor. Major asset classes have established benchmarks. Alternate asset classes do not have benchmarks, which makes it difficult to measure their performance.

Asset classes have three key attributes:

- First, each asset class has distinctive risk and return features.
- Second, factors that impact the risk and return within an asset class are similar; but risk-return factors across asset classes are different.
- Third, the performance of an investment in an asset class can be evaluated against its relevant benchmark.

Risk-return Trade off

Return is the reward to investors for bearing risk in an investment. Investors require a higher level of return to invest in assets that are risky as compared to assets with lower levels of risk. In general, higher risks are associated with higher returns. There is thus a trade-off between risk and return:

- Investors who need a higher return should be willing to take a higher risk
- Investors who do not want to take risk should settle for lower returns.

Growth assets give a higher return but have a higher risk. Income assets show a lower return with lower risk. Given this risk-return trade-off, investors select the risk-return combination that suits their requirements and risk profile the best.

The average investor is not risk-seeking; investors are reluctant to take on additional risk unless sufficiently compensated by a large return. Investors tend to choose lower return with certainty over a larger return with risk. This is called as risk aversion. For example, if the return on equity were the same as the return from a bank deposit, then investors would not opt for equity and bear a higher risk for the same return from a deposit. Equity has to offer a higher return to make it worthwhile for an investor in deposits to consider taking on the risk.

Risk Premium

The higher return that a risky asset has to provide to motivate investors to invest is known as risk premium. Riskier is the asset; higher shall be the risk premium. To understand risk premium, one has to first define the rate on an investment that is free of risk. This is known as the risk-free rate of return. The risk free rate of return is typically taken as the government short-term borrowing rate. All investments have to pay a premium above the risk-free rate to attract investors. Thus risk premium measures the difference between the return of a risky asset and the risk-free rate of return.

Diversification Benefits

The returns of different asset classes are affected by distinct risk factors. As a result the performance across asset classes is unlikely to be uniform or move together. Changes in the economic cycle, interest rates, demand, foreign inflows or other factors will bring about changes in the performance of all investments but all assets classes are not impacted by these changes in the same way. At any point in time, one asset class may be earning a higher return, while the other may not. For example, in a situation of global crisis investors may rush towards safe assets like gold and thus push its price up. On the other hand, the same situation could be negative for the US dollar, leading to its depreciation.

At different points in time different asset classes tend to perform well. A year that gives positive return for investing in equity may have negative return for debt; if short term debt instruments performed well in one year, emerging market equity investments would do well in another. If various asset classes are ranked for their performance, it is unlikely to see the same asset class performing year after year.

Investing across asset classes provides the benefit of diversifying risk. This is because asset classes in themselves may be risky, but since they are affected differently by different factors, they generally do not move together. They cancel out the risks of one another to some extent, creating a benefit of lower overall risk, called the diversification benefit.

The fundamental principle in constructing a portfolio is to enhance the benefits of diversification. If investments were made in specific stocks or bonds or any such investment product, the performance of the investment over a period of time, will be impacted by the

risk factors it is exposed to. Return may be volatile over time. For example, the returns from real estate as an asset class have shown low correlation with traditional asset classes such as equity and bonds. Including real estate therefore provides diversification benefits to an investor's portfolio. The periodic returns from real estate in the form of rentals has shown to be sensitive to inflation and tend to increase in such situations while the real returns from debt goes down. Increasing input costs in inflationary conditions reduces the profitability of companies if they are unable to pass on the increased costs to consumers and this will affect returns from equity investments.

However, if a portfolio were carefully constructed to ensure that assets are chosen and combined such that they are not exposed to the same risk factors, it may be possible to achieve a better level of return with a lower level of risk as measured by the volatility of the returns of the overall portfolio. This is called the diversification benefit. Portfolio construction using the principles of diversification does not focus on the risk and return of an asset class in isolation. Instead, we consider the impact of including an asset into a portfolio on the portfolio's overall risk and return.

5.2. Return Target, Risk Profiling and Optimisation

5.2.1 Return, Risk and Combining Asset Classes

Mr. X is a retired investor who is keen to earn a decent return on his corpus. He is planning to invest his money in a bank deposit. He is unwilling to invest in equity markets since he is worried about the risk of losing his capital. He is aware that he can earn a higher return but worries about the risk. How would you advise him?

The key considerations for Mr. X are income from his corpus and protection of the capital invested. If he stays invested in deposits, he may have to earn a lower return, which may not protect him from rising inflation. But if he is worried about the risk in equity he may not be willing to invest in an asset that can erode his capital, even if it provided higher return.

Mr. X's problem can be solved with portfolio construction, based on the simple principle that equity and debt are different asset classes, and may not move in the same direction. Adding some equity to his portfolio may have the potential of increasing his return, while not increasing the risk too much. Instead of extreme choices of low return in a deposit vs. high risk of equity, Mr. X may consider investing a portion of his investment in equity and a portion in debt, the combination of which provides him with a better return and a level of risk he is comfortable to deal with. Consider these scenarios:

	Scenario 1	Scenario 2	Scenario 3	Average
Deposit Rate	6%	8%	10%	8.00%
Equity Return	30%	16%	-10%	12.00%
20% Equity: 80% Deposit	10.80%	9.60%	6.00%	8.80%

In the above illustration, adding 20% equity to his portfolio enhances the average return from 8% to 8.80%. The risk of equity is evident as the return swings from +30% to -10%. But Mr. X's portfolio itself continues to make a positive return, since the proportion he has invested in equity is still small. The higher return in those years when equity market performed well may make up for the ones when equity market did not perform well. This is how diversification works; a risky asset can be used in a portfolio to alter the return and risk to a level the investor is comfortable with. The actual proportion in each asset class determines the overall risk and return of the portfolio, a critical decision that a financial advisor provides to his investors.

A portfolio generally does not provide a higher return from the addition of an asset, without a corresponding increase in risk. If Mr. X needed a return higher than 8.8%, he will have to increase the proportion invested in equity, and bear a higher risk.

Correlation in Portfolio Construction

The extent to which risk is reduced by combining assets depends upon the 'correlation' between various asset class returns. Correlation is a statistical measure of the extent of co-movement exhibited in the return of two asset classes. Measuring correlation provides two kinds of information: whether the asset class returns are moving in the same or opposite direction over a long term and what is the extent to which they co-move.

If returns from investing in equity and debt move completely in tandem, going up and down together, there is no benefit of combining the two investments. Investing in one is the same as investing in the other. However, if they moved in exactly opposite directions, an investor can achieve a risk level of zero by combining the two asset classes. This is because the gain on one will be exactly offset by the loss on other, so that there is no gain or loss on a net basis. In reality, he may not be able to achieve a zero risk portfolio, but can surely reduce the risk by bringing in assets that do not move in the same direction.

Correlation between two asset class return series ranges from -1 to +1.

- A correlation of -1 means that they move exactly in opposite directions. Investing equally in both brings risk to zero.
- A correlation of +1 means that they move exactly in the same directions. Investing equally in both does not modify the risk of the portfolio at all.

In reality, correlation is rarely at the extreme values of -1 or +1, instead, it lies within this range. As long as correlation between two asset classes is less than 1, some risk reduction is possible by combining them in a portfolio. This means that the proportion invested in each asset class can be modified to reduce the risk of the overall portfolio. This is the basis for portfolio construction.

A portfolio leads to diversification benefits in the form of enhanced risk-adjusted return. The investor is able to:

- Reduce the level of risk, at the same level of return
- Earn a higher level of return at the same level of risk, or
- Earn a higher return at a lower level of risk. However, after a certain level, a higher return can be earned only by taking on additional risk.

Diversification does not eliminate risk or guarantee a return; it reduces the volatility in the returns of a portfolio.

While constructing and managing an investment portfolio, the focus is always on generating a better risk-adjusted return. This means, a manager will look out for asset classes that have a lower correlation with what he holds in the portfolio, so that he can achieve better return at a lower risk. In order to achieve these benefits in portfolios that focus on a given asset class, sub-categories are used to ensure that the portfolio enjoys diversification benefits.

Sub-Categories within Asset Classes for Return

Within each asset class, there can be sub-categories. For example, oil, gold, precious metals are categories within the broad asset class of commodities. Commercial and residential segments are distinct categories in real estate investments. Large cap, mid cap, small cap, international equity, emerging market equity are all categories within a broad asset class of equity. The behaviour of these sub-categories will primarily follow the broad direction of the asset class to which they belong. While each of these categories is impacted by the same broad factors, there can be nuances which differentiate the returns and risk and create possibilities to benefit from diversification.

Quality of earnings may differ between stocks of large and established companies, as against new and smaller companies. Similarly, operational risk factors vary across industry sectors, leading to sector-based categories within equity. For example, an appreciation in

the rupee may be negative for the earnings of export-based companies in the technology sector but positive for import-intensive companies in the oil marketing sector.

Similarly, debt as an asset class encompasses several categories. Longer tenor bonds have a higher market risk and tend to be categorised separately from short-tenor bonds. Government securities, given their credit-risk free character, form a separate category from bonds that have a high credit risk.

In case of real estate investments, categorization as residential and commercial properties is the most common basis for classification. Other categorisations include investment in land versus investment in constructed property and classification based on the stage of investment in a project, such as pre-launch stage, under-construction and completed property. These sub-categories form the basis of diversification in a real estate portfolio since there are variations in the risks and returns from each category. For example, rents from commercial property is more susceptible to economic downturns, see greater volatility in rentals and values and have longer gestation periods, as compared to residential property.

The following are examples of applying diversification strategies to achieve a better risk-adjusted return in an investment portfolio. The primary portfolio will reflect the stated objective of the investment. For example, a portfolio of large cap equity securities will reflect the objective to generate long term equity returns with relatively lower volatility.

Primary Portfolio Composition	**Diversification Strategy**
Portfolio of large cap equity securities	Invest in multiple sectors and industries
Portfolio of broad-based equity securities	Invest in multiple sizes, sectors and stocks
Portfolio of Government securities	Invest in various tenors or maturities
Portfolio of short term debt instruments	Invest in various issues or types of short-term instruments
Portfolio of global equities	Invest in emerging market equity

The extent to which a portfolio is diversified is an important indicator of risk. Portfolios that focus on an asset class in a very broad sense of the term tend to have more options for pursuing diversification than portfolios that are narrowly defined to focus on a specific sub-segment. The diversification possible in a portfolio may also be affected by the type of asset classes preferred. For example the extent of diversification possible in a real estate heavy

portfolio will be limited for most investors, as making multiple large ticket investments may not be a viable option.

Return and Risk in a Personal Finance Context

Risk and return of various investment options can be estimated from historical data, modified to consider current dynamic market situations, and used to generate expectations about how these investments may perform in the future. However, it may not be possible to recommend investments to investors, without taking into account their specific situation.

Is 8% an adequate level of return? Will an investor need 14% instead? Over what time period can this return be expected? Would the investor hold the investment for a long enough period to earn the expected return? What would happen to the return if he quits earlier? Would the investor be willing to take the risk of capital erosion in investments? Is a risk of 4% too high, or too low? These are questions revolving around risk and return, for which answers might be unique to an investor's situation. Therefore features of an investment have to be aligned to the needs and preferences of an investor, before a choice can be made. This is a fundamental principle in constructing portfolios for investors using various investment choices.

Illustration

An investor has to choose between an equity fund that has provided a return of 24% over the last 10 years, and a debt fund that has provided a return of 12% over the last 2 years. The equity fund has higher risk than the debt fund. How should the investor choose?

The investor can choose equity given the high level of return. But the risk is higher too. If the investor chooses debt because the risk is low, the return will also be low. So the first point is that both risk and return cannot be optimised simultaneously. If he needs a low risk, he chooses debt; if he needs higher return he chooses equity.

The above problem can be solved by deciding on a percentage allocation to equity and debt, as we saw earlier. But making that decision on what might be the right proportion will require bringing in the investor's objectives (return requirement) and constraints (ability to bear risk). If the required return is high, the investor may have to be willing to bear the risk required to achieve that level of return.

The solution to the above problem is not mathematical, but the choice an investor makes from a combination of risk and return for various proportions invested in debt and equity. To make that choice, the investor should have a clear definition of how much return he needs, and what is the risk he is willing to bear to earn those returns.

Asset Classes and Investor Needs

Asset allocation decisions have to be aligned to portfolio objectives, risk preference and time period for which the investor likes to hold the investment. The following table summarizes risk-return features of various asset classes.

Asset Class	Return	Risk	Primary Objective	Time Period
Short term debt	Low	Low	Capital protection	Short
Medium term debt	Moderate	Low	Income	Medium
Long term debt	Moderate	Moderate	Income or growth at fixed rates	Long
Large cap equity	High	High	Growth with low income	Long
Mid and small cap equity	Higher	Higher	Growth	Longer
Private equity	Uncertain	Higher	Growth	Uncertain
Property	High	Moderate	Growth with rental income	Long
Gold	Moderate	Moderate	Growth	Cyclical

It is very unlikely that a single asset class meets all the needs of an investor. Typically, an investor will have multiple requirements from the portfolio: growth for long-term goals, liquidity for immediate needs and regular pay outs to meet recurring expenses. A diverse portfolio of securities with exposure to different asset classes may be needed to be created in order to cater to these diverse needs.

Portfolio Construction is a specialised skill that matches the needs and preferences of investors with the risk and return features of various investment avenues. The choice of investments, the proportions to be held in each asset class, the time period for which the investment should be held, and the frequency of review and revision of the investment portfolio depends on this match that investment advisors have to enable for their clients. It is a core function that an investment advisor performs.

Portfolio Return

The return from a portfolio depends upon the return of the asset classes included in the portfolio and the weighting to each asset class. A portfolio's return is simply the weighted average return of all assets included in it, the weights being the proportions invested in each asset.

Illustration

Consider a portfolio in which debt and equity have a 50-50 allocation. Equity has a return of 18% and debt has a return of 8%. What is the return of the portfolio?

Weightage to equity: 50%

Weightage to debt: 50%

Portfolio return = (50% x 18%) + (50% x 8%) = 13.0%

The combined debt-equity portfolio yields a return of 13%.

The portfolio's return will improve if the allocation to the higher return asset class is increased. But if the high return-yielding asset forms only a small proportion of the portfolio, it is not likely to significantly impact the overall portfolio return. In the above example:

- If the portfolio weights were altered to allocate 80% to equity and 20% to debt, then portfolio return would be (80% x 18%) + (20% x 8%) = 16.0%.
- If the portfolio is altered to 80% debt and 20% equity, then the portfolio return would fall to (20% x 18%) + (80% x 8%) = 10%.

A critical decision to be made in portfolio construction is the weightage to individual assets. The overall return will depend on the proportions invested in each asset. Consider these possibilities:

- An investor makes 300% return on a stock he picked. But the amount invested is only 1% of his total portfolio. Net benefit of this investment is only 3%.
- An investor leaves her money in the savings bank account since she is unable to make up her mind. If 20% of the portfolio is left at 4%, its contribution to the portfolio return is 0.80%. Instead if the money was in a fixed deposit at 9%, the contribution moves up to 1.8%.
- An investor holds 60% of the portfolio in the house he lives in. Since this asset is neither generating income nor is it likely to be sold for its appreciation in value, it is excluded from the investment portfolio of the investor. The large ticket size of real estate investments (not including those used as residence) means that it will form a significant part of the investor's portfolio, especially till such time that the investor builds exposure to other asset classes. A wrong selection or extended economic downturn that affects real estate investments can have a significant impact on the investor's overall portfolio returns.

Portfolio Risk

Unlike portfolio return, portfolio risk cannot be simply calculated as the weighted average of the risk of investments in the portfolio. This is because in addition to the risk of each investment and its weight in the portfolio, portfolio risk will also depend on the correlation between the asset classes included in it. If the assets included in the portfolio have a negative correlation, then by combining them there is a scope to reduce total portfolio risk. As the formula below shows, the correlation factor adds to individual asset risk terms to

generate final portfolio return, so if correlation is negative, then total return of the portfolio falls below the weighted average risk of individual assets.

The formula for portfolio risk or variance for a portfolio of two assets 'a' and 'b' is

$w_a^2 \sigma_a^2 + w_b^2 \sigma_b^2 + 2w_a w_b \sigma_a \sigma_b \rho_{ab}$,

Where σ is the risk for each individual asset a and b, and ρ is the correlation between the two assets a, b.

Portfolio risk in terms of standard deviation can be calculated as the square root of the variance.

Consider a portfolio consisting of debt and equity in various proportions. Assume that the correlation between debt and equity is negative and equal to -0.60. The return on equity is expected to be 18%, and return on debt is expected to be 8%. Assume that equity risk is 22%, and debt risk is 6% (these are standard deviations).

Proportion in Equity	**Proportion in Debt**	**Portfolio Return**	**Portfolio Risk (Standard Deviation) (Correlation of -0. 6)**
0%	100%	8%	6.00%
10%	90%	9%	4. 44%
20%	80%	10%	4. 13%
30%	70%	11%	5. 29%
40%	60%	12%	7. 24%
50%	50%	13%	9. 51%
60%	40%	14%	11. 92%
70%	30%	15%	14. 39%

80%	20%	16%	16. 91%
90%	10%	17%	19. 45%
100%	0%	18%	22.00%

As seen in the above table, higher allocations to equity increase portfolio return continuously. When allocation to equity is at 100%, then the all-equity portfolio has a return that equals the return from equity (18%). However the risk in the portfolio reduces despite the addition of a riskier asset class such as equity. This is because equity and debt returns do not move in the same direction. Whenever the return from debt comes down, it is supported by the higher returns from equity. However, this reduction in portfolio risk happens only up to a certain level. In the table, exposure to equity upto 20% in the portfolio brings down the risk while increasing return. Beyond that, the portfolio risk increases with every increase in equity allocation and a higher return can be earned only by bearing a higher risk.

This is the principle in portfolio construction. The risk of a portfolio can be tuned by adding risky assets with higher return, which enjoy a lower correlation with other assets in the portfolio. An asset's own risk and return features are less important than how it works in combination with other assets in a portfolio.

Portfolio Constraints: Risk Tolerance and Investment Horizon

The selection of assets in a portfolio is primarily driven by the portfolio objectives and return requirements of the investor. The proportion to be invested in various assets to achieve the stated return however depends on the constraints of the investor. Thus the key constraints in portfolio construction are the risk tolerance of the investor and investment horizon.

In asset allocation, risk profiling is a key process. It enables the advisor to ascertain whether the investor is able and willing to take on the risks of the products being chosen for him. A retired investor who chooses to invest in a sector fund with a hope that his investment would double in a short period of time is taking on a risk which he may not have appetite for. He may not be able to risk his life's saving to create the corpus that is meant to fund his retirement, in a risky asset that can potentially erode in value in the short term and is not well diversified.

Risk Profiling

Risk profiling is an exercise that determines the level of risk that an investor can take. It is an assessment of an investor's risk tolerance. Financial risk tolerance depends upon risk capacity and risk attitude.

Risk attitude is a preference of the investor towards risk. Some investors may be unwilling to accept loss in invested amounts; some may be unwilling to risk a dynamic redemption value; some may dislike varying pay outs; some may not like products that do not offer liquidity. Risk attitude is a psychometric attribute. Each investor may have a different response to a risky situation, and may choose to avoid, mitigate, directly deal with or actively manage risks.

Risk attitude, or the willingness to assume risk, is a subjective factor which is difficult to assess. It is defined not by the investor's financial situation but by psychological factors. An individual's attitude to risk is influenced by his level of knowledge and experience with investment matters. It can also be shaped by immediate experiences. For example, when equity markets are going up, the levels of optimism amongst investors is high too and they are willing to take higher risks.

Risk capacity is the ability to take risk, which relates to an individual's financial circumstances and investment knowledge. This can be objectively measured by financial parameters such as total wealth, income, savings ratio and net worth. An investor with high net worth, adequate insurance or adequate emergency funds enjoys a relatively strong financial position, which in turn implies a higher capacity to take risk. On the other hand, if the investor has high liquidity requirements, such as the need to withdraw for an emergency, then the capacity to take risks will be low. The ability to save has an impact on the capacity to take risk. Investors with low savings and investments tend to avoid high risk investments. Risk capacity is based on verifiable facts and is therefore the more dependable portion of the risk profiling exercise.

Risk attitudes are typically measured using psychometric testing tools. The use of a questionnaire to assess risk tolerance is the most commonly used approach. The questions attempt to get a view on investing, making loss in investments, volatility in returns, need for capital protection and willingness to take greater risk for better returns. Various models are used to analyse the information and arrive at the risk score based on which asset allocation and investment choices are tuned for the investor.

Allocation based on the risk profiling exercise may be unsuitable to the investor if due consideration is not given to both ability (capacity) and willingness (attitude) to take risk. Many risk profiling exercises focus excessively on the emotional aspects of risk tolerance. However, an investor's attitude to risk may be derived from recent experiences or based on inadequate information. When there is uncertainty in financial markets, the responses may indicate an unwillingness to take risk. Or, the respondents may not have enough knowledge

or understanding of investments and therefore choose to be safe. If such responses are used to allocate assets, then the investor may end up with a lower risk portfolio despite having a good ability to take risk. If an investor seeks modification in the asset allocation each time an investment under-performs, it suggests a greater willingness to take risk.

The risk profile of an investor tends to change over time. The risk tolerance of an investor is not static but changes with changes in factors that affect attitude and ability to take risk. Life changing events such as marriage, children, and retirement affect the risk tolerance. Other factors such as changes in level of income, debt, or changes in the investment horizon also impact the risk profile of the individual. Any changes in risk taking ability have to be monitored so that the portfolio is aligned to the new preferences.

Standardising Portfolio Construction

Advisors work with model portfolios, or portfolios that capture a standard set of risk, return, and holding period. These model portfolios hold an indicative allocation that may be suitable for investors who fit the defined risk profile and investment objective. In constructing standard portfolios, two broad approaches can be followed to understand the risk-return preferences of investors.

One approach is to use the life cycle stage of an investor to understand differences in the risk and return preferences of individuals. It has been observed that most individuals follow predictable life cycle stages in their patterns of earning, spending, saving and willingness to take on risk in investment. Consider these standardisations used commonly in financial planning:

- Young investors are capable of taking higher risk. There are likely to be lower claims on their income and able to save more. They may have long investing horizons and high preference for growth assets.
- Investors with young dependent families are usually less able to take risks. Their ability to save may be low because of higher expenses on setting up home and family. They may have uncertain investing horizons, high liquidity needs and a combination of growth and income assets might help them.
- Investors at a stage where income levels are high and expenses have stabilized are considered to have higher risk-taking ability. Savings are likely to be high at this stage. They may seek long-term growth assets to accumulate wealth.
- Investors close to retirement see their risk tolerance coming down. They are closer to the distribution stage in their life and seek a reduction in holding period, and a switch to income from growth.
- Retired investors seek regular income, shorter investing horizons and low-risk portfolios. They are keen to distribute their wealth and like protection of their wealth from capital erosion.

The life cycle of the investor has to be seen in conjunction with the individual situation to get the correct risk profile.

Another approach to understanding risk preferences is to classify investors broadly into categories based on their risk and return profiles.

- An investor with a short to medium term investing horizon, who is unwilling to take risks on capital and likes regular income may be said to fit a conservative profile.
- An investor with a longer term investment horizon, but with the need for both income and growth and a moderate level of risk tolerance may be in a moderate profile.
- A risk-seeking investor with longer term investing horizon, focus on growth and tolerance for short term losses may fit an aggressive profile.

Indicative model portfolios for these profiles may be constructed describing return, risk and time horizon attributes. Consider this illustrative example:

Asset Classes	Conservative	Moderate	Aggressive
Cash and Debt	80%	45%	20%
Equity	10%	45%	70%
Alternatives	10%	10%	10%
Total	100%	100%	100%
Return expectation	8% - 9%	10% - 12%	>15%
Risk tolerance	3% -8%	8% -16%	>16%
Time horizon	2-3 years	3-5 years	atleast 5 years

Proportions to be invested in various asset classes may be determined based on the above descriptions, and offered to investors as a standard solution. The advisor is evaluated based on the ability to meet the risk and return objectives over the given time horizons.

5.3. Impact of market cycles on asset allocation and product selection

Asset classes are subject to cycles that alter their returns and performance. Investors in equity for the long-term, who have reasonable risk tolerance, may find it tough to stay invested in persistent down cycles. It may be equally tough to stay out of overweighting equity in a bull run. The double-digit returns from equity would convince even the conservative investor to consider a higher allocation to equity.

The dynamics of asset class performance makes it a challenge in managing asset allocation for the long run. Different asset classes perform well in different market conditions. While it may be tempting to try and forecast asset class returns for the future, it may be risky to do so. However, some tuning of portfolios can be done with a good understanding of asset class cycles and an analysis of indicators that may show whether an asset class looks too overvalued or undervalued.

All asset classes are impacted by economic cycles and their performance can vary significantly at different phases of the market cycle. Stocks are expected to do well during the growth and recovery phase, while commodities may do well during a period of inflation and interest rate hikes. Money market securities may do well during a period of low growth, high inflation and high interest rates. On the other hand, bonds may do well when there is low growth; low inflation and interest rates are being cut. A situation of high inflation is positive for gold prices but negative for equity; high and rising interest rates are positive for short-term debt but negative for long-term debt. Real estate investments benefit from capital appreciation in periods of low interest rates and rental incomes tend to go up in periods of inflation.

A bull run in the equity markets starts off with large cap stocks and then moves on to mid and small caps. When interest rates start declining, price appreciation in bonds begins with government securities and then moves on to corporate bonds. Sectoral differences in performance are also seen at different points in the economic cycle. Sectors such as commodities, auto, construction, cement do well when the economy is an upturn; defensive stocks such as FMCG, pharmaceuticals do well when the economy is in a downturn.

Asset allocation that has been made with a view of the investor's needs may require tuning, depending on the economic cycle.

For example, when interest rates were reduced in 2008 in response to the financial crisis, gilt funds and long term bond funds outperformed all other debt funds. However, when rates were increased in 2011, short term funds and liquid funds were the best performing debt funds.

The allocations to various asset classes has to take into account the risks posed by economic cycles. An investor with aggressive risk preference and need for long term growth, investing 80% in equity, might expose the portfolio to risks of economic cycles that can depress the return from equity. Similarly, an investor with 50% in gold might be impacted by the cycles much more than someone with a lower allocation.

The proportionate allocation to each asset class should not only consider the benefits of diversification, but also the impact of economic cycles on asset class performance.

Core and Satellite Portfolios

The core-satellite strategy is a method of portfolio construction that allows investors to focus on long term financial goals while minimizing volatility, costs and taxes. In this approach, investors differentiate between two segments in their portfolio. The core portfolio is geared to meet the long-term goals and strategic needs of an investor. It should form at least 60-70% of the portfolio. Investments that are part of the core are long-term

holdings; changes in the core portfolio are made only when there is a change in investor needs, objectives or life stage.

The core should ideally consist of passive investments that track major market indices, such as index funds. Alternately, investments that are geared to generate market returns are also suitable for the core portfolio needs. For example, diversified equity funds and large-cap funds are funds that generate returns in line with the market. Short-term debt funds and income funds generate debt investment returns in line with market rates.

The satellite portfolio should include actively managed investments. These investments are tactical in nature and form a smaller part of the total asset allocation of the investor. Satellite investments are managed in order to benefit from economic and market conditions. The higher risk-adjusted returns that these investments provide push up the overall returns of the portfolio. For example, long-term gilt funds seek to gain from an increase in the price of securities when interest rates are declining. Sector specific funds benefit when the economic conditions are suitable for the particular sector. However, management of satellite assets requires that investors must be able to identify the right time to invest and exit from the investment.

Core portfolios can be focused on earning a return close to what the benchmark for an asset class offers. The booster to the portfolio's return can be earned from the satellite portfolio, which tries to add value over and above the benchmark returns.

The core portfolio provides stability and long term appreciation. The satellite portfolio offers an extra risk-adjusted return that pushes up overall portfolio returns. Since investments that form part of the core portfolio are not churned frequently, there is a reduction in transaction costs and volatility for the investor. Liquidation for meeting cash needs is usually done from the satellite portfolio. As a result the impact of transaction costs and tax incidence on trading gains is limited to the satellite portfolio. The core part of the portfolio controls manager risk, while limiting management fees. The active satellite assets provide diversification benefits and possible outperformance of the benchmark.

Consider the portfolio constructed for an investor in his late 40s with a good income and financial stability. The investor has preferred a lower risk debt oriented portfolio and requires a return of 10% to meet the various goals. There have been periods when this has been difficult and the investment adviser has suggested a core and satellite portfolio strategy to generate better returns. The suggested allocation has been 75% in a core portfolio of debt-oriented investments and 25% in a satellite portfolio that is actively managed to benefit from macro-economic and other factors that impact asset classes. The funds allocated for active management are held in short and ultra-short term investments if they are not allocated to the satellite portfolio.

In early April 2014, the adviser suggests exposure to some equity in anticipation of a stable government after the elections and stock markets responding to the expected economic upturn and some allocation to gilts to benefit from the expected reduction in interest rates as inflation moderates. The portfolio performance for the period ending 31st October 2014 is given below under two scenarios: scenario 1, where there is no satellite allocation, and scenario 2, where there is a 25% allocation to the satellite portfolio as suggested by the adviser.

Scenario 1		
	Core	Returns
Short-term Debt	30%	6.5%
Long term Debt	50%	9.0%
Ultra-short term Debt	15%	6.0%
Liquid	5%	5.5%
Portfolio Return		**7.63%**

The return from the portfolio during this period has been lower than the required return of 10%.

Scenario 2			
	Core	Satellite	Returns
Short-term Debt	15%		6.5%
Long term Debt	50%		9.0%
Ultra-short term Debt	5%		6.0%
Liquid	5%		5.5%
Gilt		10%	12.5%
Large Cap Equity		15%	35.0%
Portfolio Return			**12.6%**

By making a 25% allocation to an actively managed satellite portfolio, the returns have gone up to 12.6%. The equity allocation is to large-cap equity keeping the preference for lower risk.

5.4. Evaluating and Selecting Mutual Funds

5.4.1 Principles of fund selection

Mutual funds offer a range of products to investors. These products are designed to meet various investment objectives of investors. Some investors are looking at their retirement needs; others are trying to fund a short holiday. Some are seeking a steady income; others are seeking long term growth. Mutual fund products are primarily created to cater to a large range of customer needs. In order to use mutual fund products to meet the financial

planning and wealth management need of investors, advisors have to understand what the products offer, how to recommend them, to whom and for what need.

Products can be differentiated on the basis of expected risk, potential return and investment horizon. For example, investors, who are willing to take higher risks for higher level of return, tend to choose equity products. Investors, who seek regular income and a lower level of risk, tend to choose debt products. Long term investors may choose equity, while investors with short to medium term horizons choose debt and debt-oriented products.

Asset Classes and Funds

Mutual funds invest across multiple asset classes. The risk, return and holding period requirements for each of these asset classes vary. Equity as an asset class enables long-term growth in value, but can be volatile in the short-term. Short-term debt instruments provide a steady level of return with lower risk and are suitable for short time horizons. A combination of equity and debt enables further diversification and provides a composite portfolio to the investor.

Each fund describes the asset classes it would invest in, their proportions and how it would construct its portfolio. This indicative asset allocation is pre-decided at the time of launch and is available in the Scheme Information Document (SID) of the product.

Illustration – Funds and Their Indicative Asset Allocation

Scheme	Asset Allocation
XYZ Technology.com Fund	Equity and Equity related instruments : 80-100% Debt and Money Market Instruments : 0-20%
XYZ MIP Fund	Money market and debt instruments: 75 – 100% Equity securities: Upto 25%
XYZ Income Opportunities Fund	Floating rate debt securities or money market securities: 65 - 100% Fixed rate debt securities: 0 - 35%

The portfolio of each of the funds is different. While one is an equity fund, the other is a debt fund. The MIP is a hybrid fund that invests in both equity and debt. The dominant asset class in this product is debt, while some portion is invested in equity.

This indicative asset allocation should be read for the dominant asset classes. Most funds retain the option to invest a portion in the money market purely for defensive considerations to go into cash if needed.

Investment Objective

In order to decide suitability of a fund to investors, information about how the money would be invested by the fund is important. This is defined by the investment objective of a fund. It describes what the fund seeks to achieve. The investment objective read along with the investment pattern of the scheme have to be used before choosing a fund.

The investment objective of a diversified equity fund may be long-term capital appreciation by investing in equity. Its indicative asset allocation should have a higher percentage in equity securities. Similarly, the investment objective of an income fund may be to generate income by investing in debt securities of various maturities. The indicative asset allocation should match this objective.

It is also important that the investment objective of the investor must match that of the fund. An investor seeking short-term income should avoid an equity fund, which may not be able to generate such income in a short period. An investor seeking a diversified exposure to equity should not invest in a sector fund that has a concentrated portfolio. Some examples of actual investment objectives are in the table below:

Illustration– Examples of Investment Objectives

Scheme	Objective
XYZ Small and Mid Cap Fund	To generate long term capital appreciation from a portfolio substantially constituted of equity and equity related securities, which are not part of top 100 stocks by market capitalization.
XYZ Balanced Fund	To generate long term capital appreciation and current income from a portfolio constituted of equity and equity related securities as well as fixed income securities (debt and money market securities).
XYZ Natural Resources and New Energy Fund	To generate capital appreciation and provide long term growth opportunities by investing in equity and equity

	related securities of companies domiciled in India whose predominant economic activity is in the: (a) discovery, development, production, or distribution of natural resources, viz., energy, mining etc.; (b) alternative energy and energy technology sectors, with emphasis given to renewable energy, automotive and on-site power generation, energy storage and enabling energy technologies.
XYZ Government Securities Fund	To generate income through investment in Central Government Securities of various maturities.
XYZ Liquidity Fund	To generate a reasonable return commensurate with low risk and a high degree of liquidity, from a portfolio constituted of money market securities and high quality debt securities.

The objective and preferred asset class for investment are provided to enable the investor to understand the risk-return profile of the fund. For example, both the G-Sec fund and the liquidity fund are debt funds. But one generates income from investing in G-Secs of various maturities, and therefore will feature higher return and higher interest rate risks; the other invests in money market securities and therefore may have a lower return and lower risk. Similarly, the risk-return profiles of the three equity funds listed above would be different, based on the objective and the asset classes they invest in.

Portfolio Features of a Fund

The investment objective is met through the portfolio of the fund. The investment strategy of the fund describes the strategy the fund manager will adopt to create and manage the portfolio of the fund as required by the investment objective. The selection of securities and the approach to manage the portfolio will depend upon the strategy of the fund manager.

For example, an equity fund's objective is to generate long-term capital appreciation by investing in equity securities. It may decide to invest with a focus on large caps. It could also choose value investment style, by investing in stocks that are inexpensive. Alternately, it may choose a sector-specific approach that focuses on a few sectors.

Though all these funds have long term capital appreciation as the objective, they take different paths to get there.

The investment decision by an investor has to consider the strategy of the fund because it has an impact on risk and return. For example, investing in large cap stocks may be less risky, but higher exposure to chosen sectors and stocks may be more risky.

An investment strategy is evaluated based on what is the additional risk the fund manager takes to beat the benchmark. An active equity fund expects to do better than an equity index and may pursue various strategies to accomplish that. In this case, the fund takes on aggressive sector and stock positions to generate a better return.

Returns in a Mutual Fund

The return from a fund will broadly track the returns from the asset class in which the fund invests. For example, an equity fund will deliver returns in line with the equity market. Similarly, a gold fund will deliver returns in line with the gold prices. An actively managed fund will try to beat the benchmark returns. An investor whose need is to allocate money to an asset class, can chose a passive index or index fund, or an active fund that invests in the same asset class, but tries to provide a higher level of return.

Mutual funds are relative return products. It does not make sense expecting an absolute return from a fund, when its composition is aligned to an asset class. While choosing a fund, the fund returns have to be compared with the asset class index or peer group funds. The return across various types of funds would be different, based on the asset classes they invest in, the performance of those asset class during the period of evaluation and the ability of the fund to beat its benchmarks.

Illustration– Returns and Portfolio Composition

The return for the calendar year 2012 was the following:

- XYZ Equity Fund 33.26%
- XYZ Income Opportunities Fund 9.56%
- XYZ Money Manager Fund 8.90%

All these funds are from the same fund house. Why is there a variation in their performance?

The difference in performance can be explained by the different asset class composition of the funds.

- XYZ Equity Fund invests in equity securities
- XYZ Income Opportunities fund is a debt fund.
- XYZ Money Manager Fund is a money market fund.

In the one-year period under consideration the return from each of the asset class was different. Fund returns vary depending upon the asset class they invest in and the performance of the underlying asset class. In the above example, equity as an asset class out-performed all the other asset classes during the one-year period under consideration.

Within a given asset class, portfolio strategy and composition can create differences in fund performance. Equity funds may have different strategies and investment focus.

Returns and Portfolio Composition

XYZ Equity Fund	33.26%
XYZ Top 100 Fund	30.29%
XYZ Small and Midcap Fund	45.00%
XYZ Focus 25 Fund	26.87%

All four funds are equity funds. Why is there a variation in their performance?

The portfolio composition, focus and strategy for each one of the funds is different.

- XYZ Equity Fund is a multi-cap fund.
- XYZ Top 100 is a large-cap fund
- XYZ Small and Midcap Fund focuses on smaller stocks
- XYZ Focus 25 Fund is a concentrated fund investing in select stocks

The performance of each of the above equity fund varies depending on the performance of each of the segments it focuses on, and how well its investment strategy worked in the given time period.

Investors seeking exposure to equity as part of their financial plan would choose an equity fund based on how they like to implement their strategy. A diversified allocation strategy that takes advantage of this range of options to invest in equity, would allocate to all these funds in various proportions. The allocation will depend on the return requirement and risk profile of the investor:

- Investors seeking low-risk diversified exposure would choose the equity fund.
- Investors seeking a higher risk diversified exposure would choose the small and midcap fund.
- Investors seeking a concentrated focus to large cap would choose the Focus-25 fund.
- Investors seeking a diversified exposure to large cap stocks would choose the Top-100 fund.

The funds that would be chosen, the proportion to invest, and the time period for holding them will depend on how well the fund's composition, investment strategy and asset allocation are aligned to the investor's objectives and strategy.

Relative Return

Mutual funds enable investing in various asset classes, through diversified portfolios. Even funds that focus on a sector or segment within an asset class tend to create portfolios of stocks to seek exposure to that segment. Asset allocation strategies in financial planning can be easily implemented by choosing a fund that meets the requirement of the plan.

There are two approaches to managing a portfolio:

- Passing strategies replicate an index. Their return is similar to the underlying index. They also feature low expense ratios.
- Actively managed funds attempt to do better than the underlying index. They adopt security selection and timing strategies to achieve this. They charge a higher fee.

Mutual fund returns are therefore closely aligned to the return that is delivered by the asset class in which they invest. In order for an investor to evaluate if the active strategies have paid off, they compare the returns of a fund with the underlying index. Such indices used in evaluating funds are also called benchmarks.

Mutual fund returns are largely aligned to the returns of the benchmark. Mutual fund returns have to be evaluated in relative terms with respect to the benchmarks. A focus Fund's return of 26.87% is lower as compared to that of 33% delivered by a diversified equity fund, and 45% delivered by a small and mid-cap fund. But if it is higher than its benchmark, representing its strategy of investing in a small set of equity shares, it is still a worthwhile fund to select. Choosing a suitable fund will therefore have to be aligned with the strategy the investor seeks to pursue. Different strategies do well under different market conditions, and feature different levels of risk and return.

Risk in a Mutual Fund

A mutual fund is primarily structured as a diversified portfolio. Therefore by definition, the risk to the investor is lower than directly investing in securities. A mutual fund portfolio is constructed to ensure that investments are made across securities and sectors, to enable diversification.

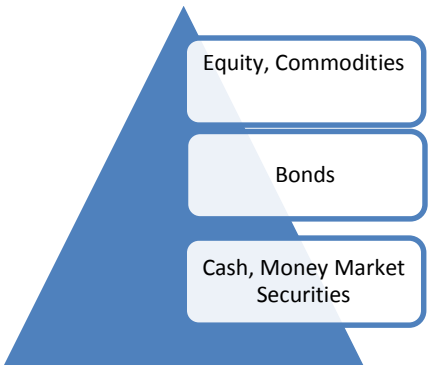
However, diversification will not be able to reduce market risks. The risks of investing in equity can be reduced by choosing different segments, sectors, and stocks. But the overall risk that returns would be lower if the market itself was going through a bear phase cannot be reduced, or diversified.

The risk to the investor arises from the actual performance being different from the return expectations. For example an investor may choose an equity fund expecting a 15% return, based on historical averages for equity. The fund may not deliver 15% return in the following year, because equity market went through a down turn during the period and stock prices did not rise as expected. An investor may choose an income fund expecting 10% return, based on past experience. If the interest rates during that period in the market were lower, it may deliver less than 10%.

Mutual funds are subject to risks. Equity is subject to risk of changing market cycles and unpredictable performance of companies. Debt is subject to risk of changing interest rates and changing probability of default.

A mutual fund invests in a portfolio of securities. These securities are traded in the markets and their price can vary, based on market conditions. When an investor buys mutual funds he assumes these market risks. The value of his investments moves up and down based on the market prices.

The primary risk in a mutual fund is market risk. Equity funds cannot deliver positive returns if the markets are down and negative. Investment in riskier asset classes, such as equity and commodities, may make a fund risky, while a fund investing in bonds and government securities may be considered relatively less risky. An investment in money market securities would enable a stable return, with low risk.



Investors may be willing to bear higher risk only if the returns are higher. They may be unwilling to take on risks, if there is no trade-off by way of higher return. The risks of various asset classes can be summarized as below:

Equity	Commodities	Bonds	Cash
• High risk • High return • Growth-oriented	• High risk • High return • Growth-oriented	• Medium risk • Stable return • Income-oriented	• Low risk • Low return • Income-oriented

The nature of the mutual fund product is such that the NAV reflects both the income earned and the current market value of the portfolio. Therefore equity funds may feature some dividends, and debt funds may also feature some growth. The dominant attribute of a fund has to be considered before making a choice.

The primary source of risk in a mutual fund arises from the asset classes, or segments within the asset class it chooses to invest in. The next big source of risk, typical to actively managed funds is from the investment strategy adopted to beat the benchmarks.

Before choosing a fund, investors may like to adopt two tests of suitability:

a. Suitability of the asset class to their return requirement and time horizon
b. Suitability of the investment strategy for their risk preferences

The portfolio construction solutions offered by advisors need to consider the above two, before combining various funds for an investor's financial goals.

5.4.2 Selecting Equity Funds

Types of Equity Funds

Equity funds invest in equity instruments, such as shares, derivatives and warrants. Most equity funds are created with the objective of generating long-term growth and capital appreciation. The investing horizon for equity products is also longer since equity as an asset class may be volatile in the short term.

Stocks can be classified on the basis of market cap and industry. Classification of equity funds is based on the type of stocks they invest in. Hence, equity funds may be diversified funds, large cap funds; mid and small cap funds, sector funds or thematic funds, depending upon the sectors and the market segments that they invest in.

Equity funds may adopt a growth or a value strategy. The kind of stocks they pick up could be different, depending on this investment style. A growth fund focuses on companies with high earnings growth; while a value fund would look for good businesses at an attractive price.

Equity funds may be diversified, investing across sectors and stocks, or may pursue focused strategies that aggressively overweight certain sectors or stocks.

The risk and return of an equity fund depends on the investment universe and the strategy adopted. Different categories may perform well at different point in time. For example, a diversified large cap fund may post relatively better performance in a falling market, when business risks are high in the case of mid cap stocks. A focused technology sector fund may do well when that sector outperforms the broad index.

A portfolio strategy that considers the investment universe of these various types of equity funds may enable combining risk and return in various ways as required by the investor.

Risk in Equity Funds

All equity funds are subject to market risk. An investor investing in equity funds must be prepared for some volatility. There are four elements to risk in an equity fund:

a. Market risk arising from equity as an asset class. All types of equity funds will show some element of sympathy to the overall market index, irrespective of their actual composition and style. If the overall market is bullish, all equity funds will move up; and they will be down if the markets are down.
b. Segment or sector risk arising from portfolio composition. The risk of one equity fund can vary from that of another, based on the focus segment of the fund. A large cap fund may outperform a mid-cap fund in some market phases; or an infrastructure fund may outperform a technology fund. These differences arise out of differences in risk and return across market segments.
c. Risks from concentration. Not all equity funds may be diversified. A large cap fund that invests in the top 100 stocks is more diversified than another large cap fund that may choose to focus on the top 25 stocks. Both funds will feature different risk and return.
d. Risks of underperformance. A fund manager with the mandate to invest in a specified asset class, segment, or style, takes on selection and timing calls about how much of which stocks he would buy, and hold on for how long. These calls may deliver a return that is different from the benchmarks.

The selection of equity funds will have to consider all these elements of risk. Different equity funds may show different levels of volatility, different abilities to beat their benchmarks, and different levels of performance across market cycles. An actively managed equity fund tries to beat its benchmark by modifying the sectors, stocks and the proportions invested and holding period in each of them.

Every diversified equity fund will hold stocks across sectors. Different sectors do well in different market scenarios. Sector performance is impacted by different market factors prevailing at a certain point in time. For example, while banks, capital goods and real estate may out-perform when the interest rates are falling, consumer non-durables may under-perform. Similarly, while infrastructure and cement may under-perform in a bear market, health care and FMCG may out-perform. The performance of funds is impacted by the sector allocation of the portfolio.

A diversified equity fund primarily uses sector rotation, stock selection, stock weighting, and market timing as the strategies to do better than the benchmark index. It is also common for diversified large cap funds to have some allocation to mid-cap and vice-versa. A

diversified fund typically features risks similar to a market index, unless the portfolio is specifically skewed in favour of one segment or the other. Selecting the benchmark to evaluate the diversified equity fund is important in this context.

Equity Linked Savings Schemes (ELSS)

Equity Linked Savings Schemes (ELSS) is a special category of diversified equity funds, designated as ELSS at the time of launch. Investment in ELSS to the extent of Rs. 1.5 lakh in a year enjoys a tax deduction under Section 80C of the Income Tax Act. Investors can buy the units to claim tax deduction at any time of the financial year.

An ELSS can be offered as an open-ended scheme, in which case, a fund house can have only one such scheme. Funds can also offer ELSS as a closed-end scheme. Investment in both, the open and closed end ELSS is subject to a 3-year lock-in. The lock-in period will apply from the date of purchase of units. During the lock-in period, investors cannot sell, redeem, pledge, transfer, or in any manner alter their holding in the fund.

The Rajiv Gandhi Equity Savings Scheme, 2012 provides tax benefits to investor who invest in eligible mutual fund schemes up to specified limits under section 80CCG. To be eligible the schemes have to invest in securities that form part of the S&P BSE 100 or Nifty 100, shares of PSUs classified as Maharatnas, Navratnas and Miniratnas, among others. The scheme has to be listed on a stock exchange and settled through the depository mechanism. The Rajiv Gandhi Equity Savings Scheme (RGESS) offers a rebate to first time retail investors with annual income below Rs. 12 lakhs. 50% of the amount invested (excluding brokerage, securities transaction tax, service tax, stamp duty and all taxes appearing in the contract note) can be claimed as a deduction from taxable income. The investment of Rs. 50,000 can be spread over a block of 3 financial years. The investment will have a lock-in of three years of which the first year will be a fixed lock-in during which no sale or transfer is allowed and the next two years will be a flexible lock-in during which transactions are permitted, subject to certain conditions. Mutual funds announce specific schemes that are eligible for the RGESS deduction.

Diversified vs. Concentrated Funds

Diversified equity funds invest across various sectors, sizes and industries, with the objective of beating a broad equity market index. These funds feature lower risk due to the benefit of diversification and are suitable for investors with long investment horizons. Underperformance of one sector or stock may be made up for by the out-performance of any one or more of the other sectors or stocks. For example, if the price of steel moves up, a diversified fund with exposure to auto sector alone might underperform. But one with both metals and auto sector exposure might benefit from set-off of the risks.

A mid cap fund may be exposed to a different segment compared to a large cap fund, but both funds may be diversified across sectors and stocks. This results in lower risk, though the returns from the mid cap fund is likely to be more volatile compared to the large cap fund.

Thematic equity funds invest in multiple sectors and stocks falling within a specific theme. Themes are chosen by the fund managers, who believe these will do well over a given period of time, based on their understanding, of macro trends and developments. Funds may be based on the themes of infrastructure growth, commodity cycles, public sector companies, multi-national companies, rural sector growth, businesses driven by consumption patterns and service-oriented sectors.

These funds run a higher concentration risk as compared to a diversified equity fund but are diversified within a particular theme. Such funds offer a higher return if the specific theme they focus on does better than the overall market.

Sector funds are available for sectors such as information technology, banking, pharma and FMCG. We have learnt that sector performances tend to be cyclical.

The return from investing in a sector may not be the same across time. For example, auto sector does well when the economy is doing well, and more cars, trucks and bikes are bought. It does not do well when demand goes down. Similarly, banking sector does well when interest rates are low in the market; they don't do as well when rates are high.

Sector funds could out-perform the market if the call on sector performance plays out. In case it doesn't, such funds could under-perform the broad market. For example, an investor expecting the banking sector to out-perform as interest rates drop may incur a loss in a banking sector fund, if the interest rates do not fall and the banking sector continues to under-perform. An investor expecting the commodity sector to out-perform, as economic growth picks up, may incur a loss in a commodity-based sector fund, if the economic growth does not rise as expected.

Index Funds & Exchange Traded Funds

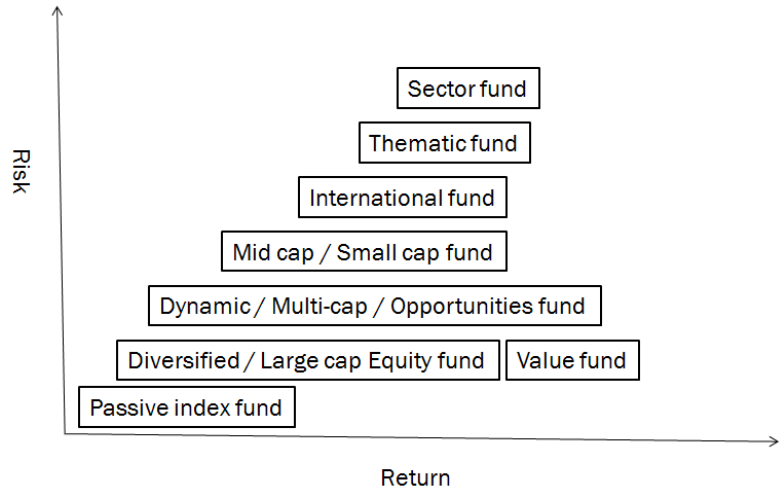
Index funds invest in a portfolio of securities that replicates the composition of a market index. The index that the fund will track is stated upfront and the assets are invested in the same securities and in the same proportion as they appear in the index. The fund could track broad market indices such as the Sensex or the Nifty or even sectoral indices. Since the fund's portfolio mirrors that of the index, the returns from the fund will also closely track the index's return. The fund manager is not expected to implement any style or strategy to generate excess returns over and above the index returns.

Exchange Traded Funds (ETF) are also mutual fund products linked to an underlying index, but listed and traded on a stock exchange. The portfolio of the ETF will reflect the specific index and the value of each unit of the ETF will be linked to the value of the underlying index. The units are first available to investors in the NFO, after which they are listed and traded on the stock exchange at real time prices. The price of the ETF unit will be based on the NAV of the scheme. Investors can buy and sell units on the exchange or deal directly with the mutual fund in creation units defined for each ETF. Creation units are the lots in which units will be created and released by the mutual fund to investors in exchange for cash subscription or a basket of shares that reflect the index. Creation units are typically large; for example, the Goldman Sachs Nifty BeEs has a creation unit size of 10,000 units. On the stock exchange, the units can be traded for a minimum lot size of 1 unit. Since the units are listed and traded on the stock exchange, investors need a trading account and demat account to deal in the units. The settlement of the transactions will follow the settlement cycle of the exchange.

Investing in an index fund or an ETF is a passive investment strategy, as against an active investment strategy of other mutual fund products where the fund manager is expected to use portfolio construction skills in selection, weightage and timing to out-perform the index. Investors who would like to earn market returns without taking a selection risks will prefer a passively managed fund or an ETF. The expense ratios of these funds are also lower since the costs of fund management are lower.

Risk-Return Hierarchy of Equity Funds

Please see below how the equity funds are positioned based on their relative risk-return profiles. Notice that passive index funds are placed right at the bottom of the hierarchy among equity funds, while sector funds are placed at the top, as they are considered the most risky. Note how equity funds are stacked up in their increasing order of potential risk and expected return.



5.4.3 Selecting Debt Funds

Features of a Debt Fund

A debt fund portfolio is made up of various types of debt securities – money market instruments, long term securities such as corporate bonds, securitised assets and government securities. Debt securities may be long term or short term in nature. Debt securities may also be classified on the basis of issuer, such as government, banks and corporates. Debt securities may also be classified on the basis of the credit ratings, such as AAA, AA, investment grade or junk.

The types of securities forming the portfolio of a debt fund will depend upon the investment objective, asset allocation and investment strategy of the fund.

Debt funds have two sources of income, coupon and capital gains. Coupon is the interest income, which is a regular feature in all kinds of bonds and government securities. Coupon depends upon the tenor of the bond and its issuer. Longer tenor bonds have a higher coupon. Also, bonds with lower credit quality typically give a higher coupon rate to compensate for the higher risk.

Funds with a greater proportion of income coming from coupon have low volatility in NAV. Such funds are considered less risky. Funds that invest in longer tenor securities gain more from change in value of bonds held in the portfolio. This gives rise to capital gains in case the value of the bond rises or a loss in case the value of the bond falls. NAVs of long term bonds are more volatile.

Debt Fund Segmentation

Debt funds can be segmented in terms of tenor as short, medium and long tenor funds or on the basis of interest rate risk as low, medium and high interest rate volatility funds.

Short-term debt funds invest in money market securities with a view to generate regular income with low volatility. Such funds have low interest rate risk. Short-term funds pre-dominantly seek interest income from coupon but they may also hold a portion of the portfolio in long-term debt leading to some volatility in return. The proportion invested in long-term securities determines the extent of risk in such funds.

Long-term funds earn a total return made up of interest income and capital gains. The extent of income they earn may depend on the credit risk they take. Funds with higher corporate bond holding may earn a higher coupon income. Long-term debt funds have a higher interest rate risk and corresponding NAV volatility.

Illustration– Short Term and Long Term Debt Funds

Short Term Debt Funds	Long Term Debt Funds
XYZ Liquidity Fund	XYZ Bond Fund
XYZ Money Manager Fund	XYZ Government Securities Fund
XYZ Treasury Bill Fund	XYZ Strategic Bond Fund
XYZ Short Term Fund	

A debt instrument is issued at a fixed coupon, which is paid regularly until its maturity. The coupon rate depends on the market situation or the level of interest rates prevailing in the market, at the time of the issue and the credit quality of the borrower. As the interest rates in the market change, the debt instrument may become more or less valuable.

With every change in market rates, existing bonds get re-priced. This is called marking-to-market. When market interest rates fall, the value of the debt securities held will go up, leading to a mark-to-market gain. When market interest rates go up, the value of debt securities held will go down, leading to a mark-to–market loss. Mutual funds are required to mark the value of their investment portfolios to market.

Such changes in the price of debt instruments are reflected in the NAV of a debt fund. The change to prices of debt instruments, in response to changes in interest rate is called mark-to-market or MTM risk.

Debt funds generate total returns, from coupon income as well as capital gains or losses from a change in price.

In a plain-vanilla bond, while the component of accrual income is fixed, it is the price component which is risky. This is because the MTM value of the debt securities held in a fund will change with a change in market interest rates. Interest rate risk is limited in case of floating rate bonds, as changes in interest rates lead to a change in the coupon on the reset date.

Funds can earn higher coupon income by holding higher coupon bonds. This may increase the credit risk of the fund as such securities may have a lower credit rating. Funds can earn higher capital gains by holding bonds whose prices are likely to go up. However, this also increases the risk of loss when prices fall.

MTM risk depends upon the duration of securities held in the portfolio. Duration is the weighted average maturity of a bond, weighted by its cash flows. Short-term securities have a lower duration risk compared long-term securities. Funds with lower average maturity hold bonds with short-term maturity and have lower MTM risk, whereas funds with a higher average maturity will have higher duration and higher MTM risk.

The total return of the fund will depend upon the composition of the portfolio, and its duration. A fund with higher duration will earn a higher component of its return from capital gains or losses, and be more volatile than a fund with lower duration.

Liquid funds that seek to provide safety of principal hold very short-term securities and only earn accrual income. Income funds seek accrual income and capital gains and hold a combination of corporate bonds, money market securities and government securities.

Components of total return will also depend upon the interest rate movements and the portfolio composition at that time. If interest rates are moving down, coupon income will be low and capital gains will be high. Funds with high duration will benefit. If interest rates are moving up coupon income will be high and capital gains low. Funds with low average maturity will benefit in such a situation.

The duration of debt funds may be increased by fund managers when they expect a fall in interest rates, as there is the potential to earn higher return from capital gains.

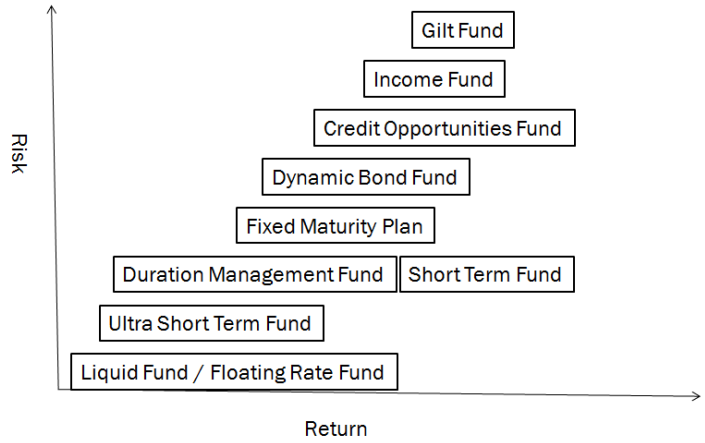
Whether a fund can modify its duration depends on its objective. A liquid fund or an ultra-short-term fund holds only short duration securities, as per its objective of providing steady returns. A dynamic bond fund modifies its duration based on the market view of the managers, and states that in its objective. A long-term gilt fund may hold a higher duration portfolio based on its mandate to invest in long-term government securities.

Fixed Maturity Plans (FMP)

FMPs are closed-end schemes that invest in a portfolio of debt securities which mature on or before the maturity of the scheme. The bonds are held to maturity and intervening changes in price does not affect the yield at maturity. This limits the interest rate risk in the fund. The yield from the fund will depend on tenor and credit quality of the securities held in the portfolio. Investors who hold the investment to maturity earn this yield. FMPs come with tenors ranging from 90 days to 3 years and some even longer. To benefit from the interest risk mitigating structure of FMPs, the investment horizon of the investor must match the tenor of the scheme. While investors cannot redeem the units from the fund directly before maturity, they have the choice to trade in the units on the stock exchange where it is listed. For this they will require a trading and demat account.

Risk-Return Hierarchy of Debt Funds

Please see below how the debt funds stack up in terms of their relative risk-return profiles. Notice that low risk, low return liquid and floating rate funds are placed right at the bottom of the pyramid, while gilt funds, being the most risky, are placed right at top.



5.4.4 Selecting Hybrid Funds

Combination of Asset Classes

Some mutual fund products feature a combination of multiple asset classes. These are pre-mix portfolios that can be used to manage specific goals and requirements. Instead of investing in different funds to meet the need for different asset classes, investor can access multiple asset classes in a single product. However, the combination, the proportions and the investment style are determined by the fund managers. Investors or advisors cannot influence how the various components may be chosen or combined.

Several mutual fund products invest in a combination of debt and equity in varying proportions. Predominantly debt-oriented hybrids invest mostly in the debt market, but invest 5% to 35% in equity. The objective in these funds is to generate income from the debt portfolio, without taking on the risk of equity. A small allocation to equity provides a kick to the overall return.

Predominantly equity-oriented hybrid funds have up to 35% in debt for income and stability. A fund must have a minimum of 65% in equity in order to qualify for tax benefits as an equity-oriented fund. Equity-oriented funds have a small allocation to debt to reduce risk from equity.

There are also dynamic asset allocation funds, which have the flexibility to invest 0% to 100% in equity and debt depending upon the fund manager's view of the market scenario. Thus, these funds have the ability to work as a 100% debt fund or a 100% equity fund, depending upon fund manager outlook.

Debt-Oriented Hybrid Funds

Debt-oriented hybrids invest minimum of 70% to 95% in a debt portfolio. The debt component is conservatively managed with the focus on generating regular income, which is generally paid out in the form of periodic dividend. The credit risk and interest rate risk are taken care of by investing into liquid, high credit rated and short term debt securities.

The allocation to equity is kept low and primarily in large cap stocks, to enable a small increase in return, without the high risk of fluctuation in NAV. These portfolio features largely contribute accrual income in order to provide regular dividend for monthly income plans (MIPs).

Debt-oriented hybrids are designed to be a low risk product for an investor. These products are suitable for traditional debt investors, who are looking for an opportunity to participate in equity markets on a conservative basis with limited equity exposure. Monthly income plan is a debt-oriented hybrid. Capital Protection funds are closed-end hybrid funds that seek to provide principal protection by investing in a combination of debt instruments and equity derivatives. The portion invested in debt securities mature over the tenor of the fund to the principal amount. The remaining funds are invested in equity derivatives to earn higher returns.

Equity-Oriented Hybrid Funds

Predominantly equity-oriented hybrids invest in the equity market, but invest up to 35% in debt, so that some income is also generated. Such funds are called as balanced funds. Balanced funds are suitable to those investors who seek the growth opportunity in equity investment, but do not have a very high-risk appetite. Balanced funds typically have an asset allocation of 65-80% in equity, and 20-35% in debt.

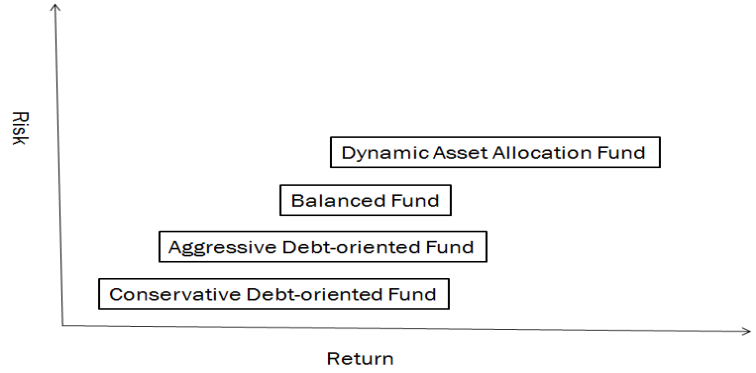
The proportions in equity and debt are managed tactically by the fund managers based on their view of the markets. In an environment conducive to equity, balanced funds' allocation to equity may be raised to 80% in order to maximise returns. In a scenario where equity markets are incurring losses, balanced funds minimise the extent of fall in the value of the portfolio by reducing equity exposure and increasing debt exposure.

An investor in 100% equity portfolio, may earn a higher return when the markets rise but will also suffer the downside associated with equity. On the other hand, an investor in 100% debt portfolio, limits the upside return from debt alone. A balanced fund enables a higher than pure-debt return, with a lower than pure-equity downside.

Risk is lower due to benefit of diversification into two asset classes. However, the trade-off is that the upside may be limited due to the debt exposure. Hence, balanced funds may not rise as much as diversified equity funds in a rising market.

Risk-Return Hierarchy of Hybrid Funds

Please see below the relative risk-return hierarchy of hybrid funds. Notice how the conservative MIPs with extremely low allocation to equity are placed right at the bottom. Note that the funds are placed in the pyramid, based on their equity allocation, which typically brings in the element of potential risk in a hybrid fund.



5.4.5 Other Funds

Apart from equity and debt, mutual funds offer products that provide exposure to other asset classes as well. These funds provide an alternate method to invest in asset classes such as gold, real estate and international securities. Investing in such funds will be based on the need to have exposure to these asset classes in the portfolio.

- **Gold ETFs** have gold as the underlying asset so as to provide investment returns that, closely track the performance of domestic prices of gold. Each ETF unit typically represents one gram of gold. For every unit of ETF issued, the fund holds gold in the form of physical gold of 99.5 % purity or gold receipts. They are also allowed to invest in the gold deposit schemes of banks to a limit of 20% of the net assets of the scheme. The custodian of the fund is responsible for the safe keeping of the assets. The actual returns from gold ETF may be lower than market returns due to the effect of fund management expense charged and cash holdings.
- **International funds** invest in markets outside India, by holding certain foreign securities in their portfolio. The eligible securities in Indian international funds include equity shares of companies listed abroad, ADRs and GDRs of Indian companies, debt of companies listed abroad, ETFs of other countries, units of index funds in other countries, units of actively managed mutual funds in other countries. International equity funds may also hold some of their portfolios in Indian equity or debt. They can also hold some portion of the portfolio in money market instruments to manage liquidity. The overseas investment limit for resident individuals has gone up to US$ 250,000 per year.

The definition of equity-oriented funds in the Income Tax Act refers only to investment in equity shares of domestic companies. If an international fund invests at least 65% of net assets in domestic equity, and the rest abroad, only then it will be treated as an equity-oriented fund.

Therefore, international funds that invest in equity shares overseas, will not be classified as equity-oriented funds for purposes of taxation.

Rewards	Risks
Portfolio diversification from exposure to global markets.	Political events and macroeconomic factors cause investments to decline in value.
Benefits from investing in asset classes not available domestically.	Investment's value will be impacted by changes in exchange rates.
Opportunity to improve long-term portfolio performance from picking global leaders.	Countries may change their investment policy towards global investors.

- **Real Estate Mutual Funds** invest in real estate either in the form of physical property or in the form of securities of companies engaged in the real estate business. SEBI's regulations require that at least 35% of the portfolio should be held in physical assets. Securities that these funds can invest in include mortgage-backed securities and debt issuances of companies engaged in real estate projects. Not less than 75% of the net assets of the scheme shall be in physical assets and such securities. Assets held by the fund will be valued every 90 days by two valuers accredited by a credit rating agency. The lower of the two values will be taken to calculate the NAV. These funds are closed-end funds and have to be listed on a stock exchange.
- **Real Estate Investment Trusts (REIT)** are trusts registered with SEBI that invest in commercial real estate assets. The REIT will raise funds through an initial offer and subsequently through follow-on offers, rights issue and institutional placements. The value of the assets owned or proposed to be owned by a REIT coming out with an initial offer will not be less than Rs. 500 crore and the minimum offer size will not be less than Rs. 250 crore. The minimum subscription amount in an initial offer shall be Rs. 2 lakh. The units will be listed on the stock exchange. Not less than 80% of the value of the REIT assets will be in complete and income generating assets and not more than 20% shall be in under-development properties, listed or unlisted debt

securities, equity shares of real estate companies, government securities, mortgage backed securities and money market instruments. A full valuation of the assets shall be done each year and an updation every six months. The NAV will be declared within 15 days of such valuation/updation. Not less than 90% of the net distributable cash flows of the REIT will be distributed to the investors atleast on a half-yearly basis.

- **Infrastructure Debt Funds and Infrastructure Investment Trusts** are vehicles that provide opportunities to invest in securities of companies in the infrastructure sector. The minimum investment is higher for such schemes at Rs. 1 crore and Rs.10 lakhs respectively. They are closed-ended funds.

5.5. Performance and Evaluation of Investment Alternatives

5.5.1 ELSS vs. Tax Saving Instruments

An equity linked saving scheme (ELSS) is a tax-saving scheme which is available along with several other products under Section 80C of the IT Act. An investor can choose any of the available products to avail of a tax deduction of Rs. 1.5 lakh currently available under this section.

5.5.2 ELSS vs. Other Tax Saving Instruments

Particulars	ELSS	PPF	NSC	Bank Deposit	ULIP
Tenure (years)	3	15*	5/10	5	5
Min. Investment (Rs.)	500	500	100	10,000	Variable, depending on premium
Max. Investment under Sec 80 C	1,50,000	1,50,000	1,50,000	1,50,000	1,50,000
Risk Rating	High	Low	Low	Low	Medium to High
Return% (CAGR)	Market-linked	8.7~	8.50/8.80~	8.5[i]	Market-linked
Interest Frequency	No assured dividend/ returns	Compounded Anuually	Compounded Half-yearly	Compounded Quarterly	NA
Taxation of Return	Dividend and Capital gains tax- free	Tax- free	Taxable	Taxable	Maturity proceeds tax-free

**15 years, which can be further extended in blocks of 5 years each for any number of blocks.*

~as of January 2016. The rates are announced every year.

[i]*Indicative average offered by banks in January 2016*

The tenure is fixed for PPF, NSC and Bank deposits. In the case of ELSS, it could be 10-years closed end, or an open ended fund. The 3-year is the minimum lock in period. ULIPs have a minimum subscription for a 5-year period.

Investors generally prefer traditional debt instruments for tax saving. While these may provide safety and stability, they fall short of generating higher inflation-adjusted returns over the long run. Instruments that earn a fixed rate of interest when average inflation is high will yield low real rate of return. This is an important drawback of traditional small saving schemes such as PPF, NSC and bank deposits.

Along with tax deduction, ELSS funds provide scope for long-term capital appreciation and higher inflation-adjusted returns. ELSS offers an opportunity to gain from market-linked returns from equity. Investments in ELSS are, however, subject to market risk and must be made taking into consideration age and risk taking ability. A young investor may have the capacity to bear some volatility in order to gain from the significant capital appreciation that ELSS funds seek to deliver. Moreover, no tax is levied on the long-term capital gains from these funds. Regular income in the form of dividends is also tax-free.

5.5.3 Mutual Funds vs. PPF

PPF is a very popular mode of saving with investors. Let us see how it compares with a mutual fund product.

Illustration: Mutual Funds vs. PPF

	Mutual Funds	**PPF**
Diversification	Various asset classes available	Only debt
Tenure	Not defined	15 years, which can be further extended in blocks of 5 years each for any number of blocks
Liquidity	Highly liquid in open-ended funds (T+3 redemption)	Partial withdrawals only allowed after 7 years
Capital appreciation / Inflation-beating returns	Possible in equity funds	Not possible

Returns	Market-linked / Subject to market risk	Fixed/Guaranteed for a specific period
Risk Rating	Low to High Risk depending on fund type	Low Risk
Taxation	Dividends and capital gains may be taxed, depending upon the fund type	Interest and principal on maturity is tax free
Limit on investment	No limit	Rs.1,50,000

The biggest advantage of mutual funds is that they allow the benefit of diversification across asset classes. An investor may diversify using various schemes and products. Diversification is also possible within a particular product.

PPF, on the other hand, is a pure debt investment with tenure of 15 years, which can be further extended in blocks of 5 years each for any number of blocks. In that sense, PPF can prove to be a very rigid investment, especially in case of an emergency when funds are required at short notice. Mutual funds on the other hand are very liquid.

PPF is popular with a certain category of risk-averse investors who do not want to subject their investments to any market risk and are content with fixed and guaranteed return provided by the PPF.

PPF is also popular owing to the fact that the interest and principal on maturity is tax free, while dividends and capital gains on mutual funds may be taxed, depending upon the fund type. However, investors must weigh the scope for capital appreciation from mutual funds versus the tax efficiency of PPF investments, before making their investment decision. Moreover, an investor may invest upto a maximum of Rs.1.5 lakh in PPF annually, while there is no such limit in case of mutual funds.

5.5.4 MIP vs. Post Office Monthly Income Scheme

Consider the table below for a comparison of the mutual fund's Monthly Income Plan (MIP) versus the Post Office Monthly Income Scheme (POMIS).

Illustration: MIP vs. POMIS

	MIP	**POMIS**

Guaranteed income	No	Yes
Liquidity	T+2 redemption	Premature withdrawal is allowed after 1 year. 2% penalty if withdrawals happens on or before 3 years 1% penalty if withdrawals happens after 3 years
Tenure	Not fixed	5 years
Max. Limit on investment	No limit	Rs.4.5 lakh/Rs.9 lakh
Taxation	Dividend distribution tax applicable on dividends Long term capital gains taxed at 20% with indexation benefit*	Interest is taxed at marginal rate of taxation
Capital appreciation	Possible	Not possible

POMIS is a small saving scheme offered by the post offices. It is a fixed income investment, which provides guaranteed monthly returns. The principal remains constant and investors receive regular income.

* Mutual funds allow investors to structure tax efficient regular returns from MIPs. Investors who need regular income from their MIP investment can opt for a Systematic Withdrawal Plan (SWP) to ensure that there is a regular payout from their investments, since dividends are not guaranteed. It can be tax efficient too for investors since all dividends paid are subject to dividend distribution tax but short-term capital gains tax depends upon the tax status of the investor. For such investors, choosing the growth option and opting for an SWP gives required regular payouts with greater tax efficiency.

In the case of MIPs, monthly dividend pay-out is intended but there is no guarantee from the fund house. POMIS comes with a fixed tenure and premature withdrawals may be subject to a penalty, whereas, the entry and exit from the MIP can be timed as per the convenience of the investor.

Also, as a fixed income investment, POMIS is unable to beat inflation, while MIP may deliver inflation-beating returns, owing to its equity component. A single investor can only invest a maximum of Rs. 4.5 lakh in POMIS and Rs. 9 lakh jointly. There is no such limit on MIP. An

investor falling in the highest rate of marginal taxation may also find MIP a tax-efficient option, since POMIS income is completely taxable.

The choice ultimately depends on the needs and risk profile of the investor. An investor keen on regular guaranteed income should invest in POMIS. But if an investor is willing to participate in upside in equity markets along with regular returns, MIP may be a suitable option.

5.5.5 MIP vs. SCSS

The senior citizens' saving scheme (SCSS) is quite popular with retired investors seeking regular income. This product can be compared with the monthly income plan (MIP) of a mutual fund for the relative benefits.

Illustration: MIP vs. SCSS

	MIP	**SCSS**
Guaranteed income	No	Yes. Quarterly interest payments.
Age criteria	None	Above 60 years
Liquidity	T+2 redemption	No partial withdrawals are allowed. Premature withdrawal after 1 year permitted with penalties
Tenure	Not fixed	5 years (extendable up to 3 years)
Limit on investment	No limit	Rs.15 lakh
Taxation	Dividend Distribution Tax applicable on dividends Long Term Capital Gains taxable at 20% with indexation benefit	Interest is taxed at marginal rate of taxation

Capital appreciation	Possible	Not possible

MIPs provide a small exposure to equity which is beneficial to get some appreciation in the capital invested. A small exposure to equity also does not expose the investor to greater volatility of equity. MIPs may not offer the guaranteed return of the SCSS, but are more flexible in terms of amount invested, time period of investment, redemption and tax benefits on withdrawals. As described earlier, investors can use facilities offered by mutual funds such as choice of growth and dividend options and SWPs to earn tax-efficient returns.

5.5.6 Direct Equity vs. Equity Funds

Mutual funds are professionally managed by qualified fund managers, who continuously monitor companies, have access to market data and company reports and can take appropriate decisions on whether to buy, sell or hold a particular stock in the portfolio. Direct equity investor needs to independently research and track the prospects and potential of companies in the portfolio in order to make buy, sell or hold decisions.

Equity mutual fund schemes are well diversified, and hold a large number of stocks. This helps in containing the risk by altering the weights in each stock or sector. A direct equity investor may not be able to achieve the same level of diversification, without strategic orientation towards which stocks to hold and how much to hold in each one of them. The portfolio may not be managed to an investment process, which protects it from behavioural biases that direct investing may entail.

The costs of rebalancing a portfolio, including transaction costs and taxes, have to be borne directly by the investor. A mutual fund may enjoy economies of scale with respect to brokerage fees and is exempt from taxes on its transactions.

Fund managers may re-balance portfolios with the changing economic scenario. They may tactically alter exposure to stocks and sectors. Direct equity investors usually buy and hold specific stocks, and may not have the expertise for rebalancing to a plan.

When investing in the stock market directly, the onus of making investing and rebalancing decisions is on the investor themselves. This requires skills and time to analyse information and market trends, which many investors may not be able to manage on their own. Fund choices, investment plans and options and other facilities offered by mutual funds that allow them to enter, exit or switch from funds and asset classes seamlessly and at lower transaction costs will not be available to investors who choose to invest directly in the equity markets.

5.5.7 Physical Gold vs. Gold Funds

An investor seeking exposure to gold as an asset class may buy a gold fund, or a gold ETF instead of buying physical gold as the advantages are many.

Illustration: Physical Gold vs. Gold Funds

	Physical Gold	**Gold Funds**
Impurity Risk	Present	Absent
Liquidity	Low	High
Transaction cost	High	Low
STCG	If sold within 3 years	If sold within 3 year
LTCG	If sold after 3 years	If sold after 3 years
Wealth Tax	Yes	No

When an investor invests in gold ETF, the mutual fund buys physical gold of 99.5% purity which is preserved safely by the custodian. Hence, impurity risk in gold ETF is absent. Gold ETF allows investors to buy gold in quantities as low as 1gm.This is done in form of demat units, where each unit approximately represents the value of 1 gm of gold. Physical gold may not be available in such small quantities. Hence, investors can even use small amounts to invest in gold. Transaction costs are low in case of gold ETFs, as only the brokerage is payable. Expense ratio on Gold ETFs is also quite low, as it is passively managed.

Wealth tax is not applicable in case of gold funds.

5.5.8 Debt Instruments vs. Debt Funds

Investors seeking a fixed income asset may like to choose bonds, deposits and other income-yielding instruments. A debt fund may hold significant advantages compared to direct investment in debt instruments.

- Debt instruments have a fixed maturity and are not easy to sell mid-term; while debt funds can be open-ended and even offer t+1 redemption for some funds.

- Debt instruments held to maturity earn only interest income; whereas debt funds can provide the benefits of both income and growth in value.
- Debt instruments are subject to credit risk; while debt funds can manage credit risk dynamically.

The G-sec market is an institutional market and small investors find it difficult to buy or sell G-secs in small lots. They also are unable to implement any view they may have about interest rates. Gilt funds enable such investors to participate in the G-sec markets, indirectly.

In a debt fund, the return to the investor is modified based on the interest rates in the market. For example, if interest rates are going up, the debt fund will make a higher yield by reinvesting in debt of higher coupon. An investor in a debt instrument earns the same coupon until maturity even if interest rates are moving up. A rising interest rate scenario, however, implies mark to market losses for mutual funds depending upon the duration of the portfolio. An investor adopting a buy and hold strategy in bonds held directly by them would be protected from the change in the value of the instruments. In case of a falling interest rate scenario, the return from a debt fund increases due to mark to market gains. Such gains may not be available to investors in direct debt, who will face limited liquidity at the time of selling their existing bonds and lower coupon when they reinvest the proceeds.

A debt portfolio offers a dynamic participation in the debt markets through a portfolio of debt securities, an advantage that is tough to replicate.

5.5.9 Bank Fixed Deposit (FD) vs. Fixed Maturity Plans (FMPs)

An FMP and a bank FD are very similar in terms of the return and risk features of the investment. Yield in the case of FD are known at the time of the investment. Though FMPs do not provide an indicative yield, the broad composition of the portfolio is disclosed and yield can be inferred from market conditions. The choice of instruments in terms of tenor and credit quality will define the yield from the FMP. For example, FMPs that primarily invest in a portfolio of Bank CDs will offer lower yield with lower credit risk as compared to the higher return with higher credit risk of an FMP choosing to invest in commercial papers. FMPs can be structured to invest across credit baskets.

An FD has better liquidity than an FMP. As a closed-end fund, exit from an FMP before maturity can be done only on the stock exchange where liquidity is low. Also, units have to be held in dematerialized form for trading.

Interest earned on FDs is taxed at the marginal rate of tax applicable to the investor. Dividends paid on FMP will be charged DDT @25% and long term capital gains will be taxed at 20% with indexation. Indexation is a benefit available to rationalize the long-term capital gains earned for the purpose of taxation by adjusting the purchase price of the investment

for inflation. The cost of inflation index is used to index the purchase price for inflation. The indexation benefit on long-term capital gains applies where the investment has been held for more than 36 months. FMP may have a tax advantage over FDs for tenors greater than 36 months.

5.6. Reviewing and Evaluating Mutual Fund Portfolios

Mutual funds publish fact sheets, which are used as a source of information to track the fund performance and portfolios on a monthly basis. It aims to keep investors informed and help prospective investors evaluate and analyze the products before investing. It is used to study the products of a fund house in detail and to evaluate its performance.

5.6.1 Reviewing Mutual Fund Portfolio

Fund houses use fact sheets primarily to disclose scheme performance. Factsheet also provides scheme objectives, fund manager's commentary on the portfolio and market outlook.

Format and Content

Disclosing information in a monthly fact sheet is a market practice that most fund houses follow. The mandatory regulatory disclosure is the half yearly portfolio disclosure, which is required to be made through daily newspapers, to the public at large. Fact sheets fall within the purview of the advertisement code of SEBI, as they contain information about the fund and are disseminated to the public.

Since it is a much-used public document providing key fund information, AMFI has worked on standardizing the fact sheet disclosures and prescribed the recommended disclosures. AMFI's guidelines are only recommendations for 'best practice' and are not binding on the fund houses for compliance.

Fund performance is shown as required by SEBI Regulation along with the return for the benchmark index. Investors are able to get a snap shot of how the fund has performed over time. Fund portfolio and the allocation across sectors and issuers are indicated.

It is industry practice to show the holding in various securities and asset classes in a scheme as a percentage of assets under management. Funds may also give additional information such as market value of securities. They may not disclose details such as the date of acquisition of securities or the residual maturity.

Summary information regarding sector allocation, maturity profile, credit quality and key portfolio level statistics are also provided for debt funds.

Return Representation

SEBI mandates that all fund returns, should be benchmarked to an index. As factsheet falls under advertisements for a mutual fund the Advertisement Code prescribed by SEBI is applicable. Hence fund fact sheets carry returns of the fund and the representative benchmark index. This is to enable an investor to compare the fund's performance with its benchmark to understand out-performance or under-performance.

- Fund returns are also required to be disclosed, vis-a-vis a market index as given below:
  - Equity fund returns, are to be disclosed, vis-a-vis S&P Sensex or Nifty 50.
  - Short Term Debt fund returns, vis-a-vis 1 year T-Bill.
  - Returns of Long Term Debt Funds must be compared, vis-a-vis 10-year G-Sec.
  - And Hybrid Fund returns must be disclosed, vis-à-vis S&P Sensex or Nifty 50, and 1 yr T-Bill.
- For schemes in existence for more than 3 years performance to be provided since inception, and for last 3 calendar years.
- For schemes which have been in existence for less than 3 years, returns to be provided since inception and for as many 12 month periods as possible.
- Returns since inception to be presented as point to point return on a standard investment of Rs. 10,000, in addition to the CAGR. CAGR will be expressed as a percentage.
- Where scheme has been in existence for less than a year past performance need not be provided.
- Calendar year returns must be computed as absolute returns, except in case of liquid funds where simple annualized returns are used to depict less than 1 year return. This is because the total return is steady and is made up of interest income accrued every day.

Evaluating Mutual Fund Performance

Evaluating risk and return is the first step towards evaluating a fund for a fund for investment. Though returns may be provided by a fund in its factsheet, it is important to understand the following:

- What is the return that the fund has generated in the past?
- Has the fund been able to generate better returns than the market benchmark?
- Has the fund been able to be among the top 25% of funds in its category in terms of returns?
- What is the risk profile of the fund?
- Did the fund assume risks that the investor might not have expected?
- Is the fund riskier than its benchmark?
- Did it assume more risk to generate a higher return?

Relative Return – Benchmark

A mutual fund's return will be in line with the performance of the asset class in which it invests. Funds adopt investment strategies and styles to generate better than the benchmark, which is usually an index that represents the asset class.

Market indices such as the S&P Sensex, Nifty 50, BSE 200, Sectoral indices or custom-made indices such as Crisil's Bond market indices are used as benchmarks. The benchmark selected by the fund must reflect the fund's investment objective to be relevant. The success of the investment strategy depends upon the ability of the fund to better the return of the benchmark.

The returns generated by a fund in different calendar years and different holding periods will be shown relative to the benchmark's returns in the same period.

The 12-month returns show the fund's performance for each 12-month calendar year period in the last 3 years. It enables judging the fund's performance in different market situations and ability to out-perform the benchmark consistently. Cumulative return numbers such as return since inception, show the performance of the fund for longer holding periods.

Relative Volatility

NAV movement over time can be represented in a graphical format by common sizing the NAVs and benchmark values to the same number. The graph typically depicts the growth of the NAV from its inception to the current date using a hypothetical amount such as Rs. 1000, Rs. 10 or Rs. 100,000 on the start date. A common sized graph starts from the same value and depicts the behaviour of the NAVs over a period of time. Common-sized NAV movement graphs help in visual assessment of risks.

On comparing the graphs of a liquid fund and an equity fund, the relative risk in these products would be visible from the volatility of the common sized graph. The graph of a liquid fund is a straight line, depicting stable growth in NAV. The graph of the equity fund will be seen as zigzag depicting high volatility. Higher the volatility in the daily returns as visible in the common sized graph, higher the risk in the fund.

A fund may invest in a combination of assets. A fund holding only equity investments will see greater volatility in returns and higher returns over the long term, as compared to a fund that has a combination of equity and debt.

Within an asset class the selection of sub-categories also have an impact on the nature and type of return. For example, a fund holding only short-term debt instruments will have lower returns than a fund holding longer-term debt instruments. But its returns will be less

volatile as well. Similarly, a large cap fund will see lesser volatility in returns as compared to a mid cap or small cap fund.

Risk-Adjusted Return

Risk and return move together. A fund may have posted a higher return, but that would have also come with a higher level of risk. The risk- adjusted returns is computed in order to assess whether the fund has justified taking on a higher risk by generating higher returns. Funds may disclose risk-adjusted return measures such the Sharpe and Treynor ratios in their factsheets.

The Sharpe ratio compares the excess return a fund makes over and above a risk-free rate, with its risk as measured by the standard deviation. Higher the ratio, better it is, when similar funds are compared for the same period. Sharpe ratios are used to compare and rank funds within the same category.

The Treynor ratio is a measurement of the returns earned in excess of that which could have been earned on a risk-free investment per each unit of risk measured by its beta co-efficient. Higher the Treynor ratio, the better is the performance.

Sharpe Ratio = (Return of the fund – Risk-free Rate) / Standard Deviation of the fund

Treynor Ratio = (Return of the fund – Risk free Rate) / Portfolio Beta

For example, XYZ equity fund has earned a return of 28% with a standard deviation of 18%. During the same period PQR equity fund earned a return of 36% with a standard deviation of 20%. The beta of XYZ fund is 1.4, while beta of PQR fund is 1.5. If the risk free rate of 6%, which of the two funds offers a better risk-adjusted return?

Excess Return:

XYZ Fund 28% -6% = 22%

PQR Fund 36% -6% = 30%

Sharpe Ratio

XYZ Fund 22/18 = 1.22

PQR Fund 30/20 = 1.5

Treynor Ratio

XYZ Fund 22/1.4 = 15.71

PQR Fund 30/1.5 = 20

Fund PQR shows better risk-adjusted performance, having made a higher return than fund XYZ on a risk-adjusted basis. Both Sharpe and Treynor ratios are better showing that the fund earned a higher return per unit of risk assumed.

Risks from Tactical Allocation

Mutual funds typically invest in three asset classes- equity, debt and cash. There are some schemes that invest in gold or a combination of gold and other asset classes. The risk and return features of these asset classes are distinctive. Asset allocation defines the risk-return positioning of the fund. However, a fund manager may tactically alter that allocation for a short period of time, depending on market view for the asset classes.

Examples:

- The extent of equity in a debt-oriented hybrid such as a monthly income plan is stated as 0% to 20% in equity. The strategic allocation would be 20% equity and 80% debt. The fund manager may tactically take equity to 20% or reduce it all the way to zero, based on his view of the market.
- Long-term debt securities added to the short term debt fund may enhance the return, if the fund manager view of falling interest rates materializes. However, if interest rates increase, long-term debt would suffer mark-to-market losses, increasing the risk of the short- term fund.
- A large cap equity fund with a higher allocation to mid-cap stocks could out-perform when this segment witnesses a rally. But it could be risky if large caps out-perform mid-caps.

Tactical changes in asset allocation impact returns and risk, and can be discerned from the fact sheet. A fund that adheres to its investment objective or mandate is less risky than one that alters its asset allocation tactically. Such funds run the risk that returns would be impacted if the views of the fund manager do not materialise.

5.6.2 Equity Fund Evaluation

Equity Fund Information

Mutual funds disclose the portfolios of their equity funds, with percentage holdings in various stocks that are held by the fund. Allocation to individual stocks, as percentage to, the total assets, is a standard disclosure norm across funds. This shows the weighting, of the stock in the portfolio, which is derived by dividing the market value by the total assets of the fund. Alongside the stock name, usually the sector name is also mentioned to provide enhanced information.

Detailed portfolios enable the investors to study the fund manager's stock picks and sector-wise exposures. This is used to evaluate the sector and stock calls being taken by the fund manager to understand what could have contributed positively or negatively to the performance of the portfolio.

Illustration Sample Equity Fund Portfolio

NAME OF SECURITY	SECTOR NAME	MARKET VALUE (RS. LAKH)	% TO NET ASSETS
Equity and Equity Related Securities			
Reliance Industries Ltd	Petroleum Products	10000	21.44%
Tata Steel Ltd	Ferrous Metals	8000	17.15%
Patel Engineering Ltd	Construction	7500	16.08%
Infosys Technologies Ltd	Software	5000	10.72%
Reliance Petroleum Ltd	Petroleum Products	4400	9.43%
Hindustan Unilever Ltd	Consumer Non-Durables	3200	6.86%
HCL Technologies Ltd	Software	3200	6.86%
Mahindra & Mahindra Ltd	Auto	1800	3.86%
ICICI Bank Ltd	Banks	1700	3.64%
Grasim Cement Ltd	Cement	1100	2.36%
Cash and Cash Equivalent			
CBLO/Reverse Repo		550	1.18%
Net Current Assets		200	0.43%
Total Net Assets		46650	100.00%

Allocation to Cash

The periodic portfolio statements of mutual funds will also indicate the allocation to cash and money market securities such as CBLO and reverse repo. The extent of cash holding in an equity fund or debt holding in case of hybrid funds, tells whether the fund manager is taking an aggressive or defensive stance, given the market situation. Until the fund manager deploys all funds, cash component will be high for newly launched funds. The investment pattern stated in the offer document of the scheme will indicate the extent of cash that the fund is allowed to hold. For example, equity funds with a mandate to take aggressive calls on asset class performance may be allowed to hold even 100% of the portfolio in cash and money market instruments.

Equity funds' asset allocation pattern will carry some allocation to money market securities, such as collateralized borrowing lending obligations (CBLO), reverse repo, treasury bills, and short term debt instruments, mainly to maintain liquidity.

Closed-ended funds or funds with lock-in, such as ELSS, usually are nearly fully invested in normal market conditions.

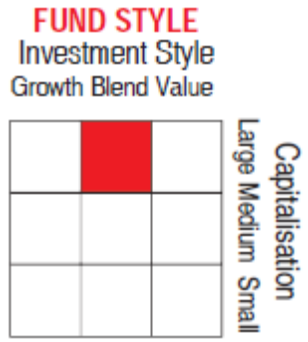
Equity Fund Style Box

Style refers to the favoured investment strategy of a fund manager to achieve the investment objective. Style of a fund is represented using a style box.

An equity fund may be managed aggressively over-weighting mid cap stocks, while another could be focussing on large cap value stocks. Both funds are not, strictly comparable, though they may be, diversified equity funds. Their risk and return features are different due to the difference in style.

The categorization is useful in determining how an investment fits into a particular investment portfolio from an asset allocation perspective. For example, an aggressive investor might focus primarily on small capitalization funds or growth funds.

Illustration Equity Style Box



The shaded area in the style box shows the portfolio positioning of the fund with respect to style. It shows that the fund is a blend of both growth and value stocks and only invests in large cap stocks. The definitions for large, mid and small cap stocks may vary between fund houses, as may the definition for what constitutes growth and value stocks. This limits the usefulness of the style box as a tool to compare peer group funds across different fund houses.

Portfolio Diversification

Diversification is a key feature of a mutual fund product. An equity fund may be called 'well-diversified', if it invests across various stocks and sectors. If a fund is concentrated in terms of stocks or sectors, the fund manager is taking an active view on the performance of the given stock or sector. Such concentration can enhance returns, if the call is right. But if the stock or sector does not perform as well as expected, the fund runs the risk of underperforming its peer group, as well as its benchmarks.

Illustration – Top 10 Holdings

Sr. No.	Name of Instrument	Rating/Industry	Quantity	Market value (₹ In lakhs)	% to Net Assets
	EQUITY & EQUITY RELATED				
	Listed / awaiting listing on the stock exchanges				
1	Reliance Industries	Petroleum Products	3,308,561	26,926.72	8.05%
2	ICICI Bank	Banks	2,355,620	24,507.87	7.33%
3	Tata Motors - A Class	Auto	12,684,194	20,155.18	6.03%
4	United Spirits	Consumer Non Durables	1,092,013	20,094.13	6.01%
5	State Bank of India	Banks	921,518	19,175.87	5.74%
6	Infosys	Software	574,905	16,712.49	5.00%
7	Wipro	Software	3,999,823	16,655.26	4.98%
8	Bharat Petroleum Corpn.	Petroleum Products	4,453,031	16,563.05	4.95%
9	Power Finance Corporation	Finance	7,918,619	15,952.06	4.77%
10	Larsen & Toubro	Construction Project	978,088	13,378.29	4.00%

The top 10 stocks constitute around 55% of the assets of the Fund. The holding in each stock is also limited so that the fund is not affected by the poor performance of one or few stocks.

A fund may follow a concentrated or diversified portfolio strategy. The portfolio may be focused, in terms of investing in one or few sectors or issuers such as a sector equity fund or a corporate bond fund, or a pure gilt fund. It will hold fewer securities in its portfolio. The exposure of the fund to each sector or security will be high.

A diversified portfolio will be invested across sectors, segments and have a large portfolio. The exposure to each sector or security will be low. The performance of a stock or sector will not significantly impact the returns of the portfolio since the holdings are small.

A concentrated portfolio therefore, has a greater selection risk relative to a diversified portfolio. Investors willing to take a higher risk to benefit from the selection skills of the fund manager may invest a portion of their allocation to equity in such funds. A diversified portfolio is suitable as a core equity portfolio holding of an investor.

Sector Allocation

Equity funds may exhibit diversification across stocks, but may be heavily concentrated across a few sectors, thus creating concentration risk for the investor. A diversified equity fund is expected to be invested across several sectors. If a fund has invested heavily across a few sectors, it may have a sector concentration that could enhance its risk. This could happen if the sector in which it has invested significantly does not outperform the fund's benchmark.

A fund with diverse sector holdings is more diversified and therefore carries a lower risk. Even if a few sectors do not perform as expected it may not affect the fund's performance significantly given the smaller weighting, of each sector in the portfolio. A fund with higher

concentration in a few sectors will be impacted positively or negatively, depending on the performance of the chosen sectors.

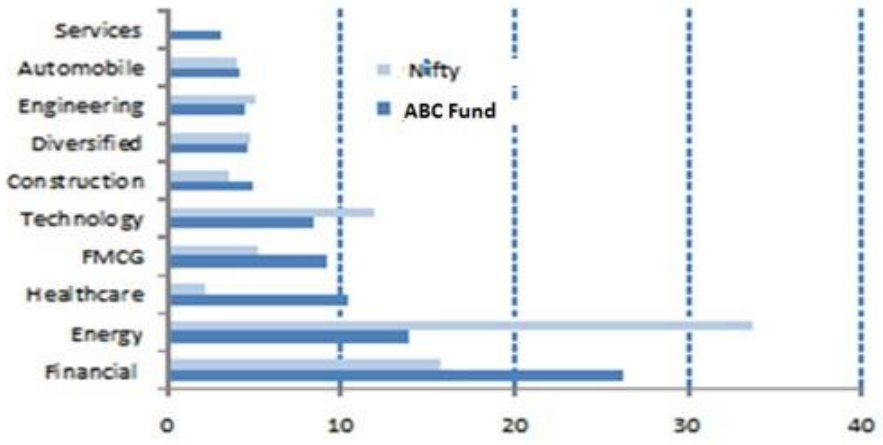
Illustration – Portfolio Diversification across Sectors

Sectoral Allocation

BANKS	23.81%	RETAILING	1.56%
SOFTWARE	14.69%	AUTO ANCILLARIES	1.46%
FINANCE	8.55%	CONSTRUCTION PROJECT	1.35%
CONSUMER NON DURABLES	7.66%	CHEMICALS	1.35%
PHARMACEUTICALS	6.43%	STOCK FUTURES	0.81%
PETROLEUM PRODUCTS	5.33%	CONSUMER DURABLES	0.72%
OIL	3.14%	TRADING	0.69%
CEMENT	3.11%	TEXTILE PRODUCTS	0.57%
AUTO	3.08%	FERROUS METALS	0.46%
POWER	2.75%	FERTILISERS	0.39%
TELECOM - SERVICES	2.42%	TRANSPORTATION	0.34%
NON - FERROUS METALS	2.14%	INDEX DERIVATIVES	0.10%
MEDIA & ENTERTAINMENT	1.91%	DEBT INSTRUMENTS	0.13%
MINERALS/MINING	1.64%	CASH & EQUIVALENT/FDS	1.85%
CONSTRUCTION	1.56%		

The Fund is diversified across 24 sectors. But it is somewhat concentrated as the top 5 sectors hold approximately 60% of its assets. The fund has a very high exposure, to the banking sector and software sector. Except for that, in the other sectors, the exposure is limited, to less than 10%. This limits the downside, if any of these sectors under performs.

A fund's outperformance or underperformance can be attributed to differences in sector weightings compared to the benchmark index.



Notice how the sector allocation of ABC Fund compared with that of its benchmark Nifty 50. Note that the fund is under-weight engineering, technology and energy sectors. Further, it is considerably over-weight financials, health care, FMCG, construction and services sectors. Also, it is equal weight in automobile sector.

How the fund will perform will depend on how these sectors perform.

- If a sector outperforms the index, the fund will outperform if it is over weighted, and underperform if it is underweighted.
- If a sector underperforms the index, the fund will underperform if it is over weighted, and outperform if it is underweighted.

Valuation Ratios

A valuation ratio is a measure of how cheap or expensive a security is compared to some measure of profit or value. If a fund has a preference for certain types of stocks, it may be visible in the fund's valuation ratios. For example, a fund that professes to choose only stocks that are priced reasonably and available at a discount to their intrinsic value, should be holding low PE stocks.

- Price by Earnings ratio compares the price of a share to the profits made per share.
- Price by Book Value compares a share price to the net worth of a company
- Dividend yield is the dividend per share divided by the current market price of the stock.

Each of these valuation ratios of each stock in the portfolio is weighted by its holding, in the portfolio. This is to calculate the aggregate average P/E, average P/BV and average dividend yield ratios of the portfolios.

Illustration – Sample Valuation Ratios

VALUATION RATIO	FUND A	FUND B	FUND C
Average P/E Ratio	28.71	22.42	18.86
Average PBV Ratio	3.44	2.96	1.72
Average Dividend Yield	1.81	2.11	4.2

Refer table above. Fund A is growth-oriented, holding high PE and low dividend yield stocks. Fund C is value-oriented, holding low PE and high dividend yield stocks.

Typically, momentum-driven stocks will trade at higher valuation, while the out-of-favour or value stocks will trade at low valuations. Value-based funds will have lower valuation ratios, such as P/E and P/BV, while dividend yield will be higher than that of growth funds.

When actual historical earnings are used for calculating the P/E ratio of a company's stock or a portfolio, it is called Trailing P/E. Trailing P/Es for all equity indices are available from data vendors such as Bloomberg or Capital Line.

Market Capitalisation

Market capitalization is an indicator of size. Market capitalization is the product of the number of shares and market price, and the latter can change with market cycles. Hence the criteria for the different classifications into large mid or small cap are not strictly defined in terms of an absolute number.

One method used to categorize stocks into large, mid and small capitalization buckets is to use the market cap of the smallest stock in the indices that represent these market segments as an indicator of the size threshold for classification as large, mid or small cap stocks.

The classification of companies into different size segments also allows investors to compare growth versus risk. Historically large cap stocks exhibit slower growth with lower risk. Small caps feature higher growth potential, but with higher risk. Many funds list, the 'average' market capitalization of their holdings, letting investors know if the fund primarily invests in large, mid or small-cap stocks. Some funds provide the break-up in percentage terms for each category.

5.6.3 Debt Fund Evaluation

Debt Fund Information

Debt funds disclose their portfolios by providing a list of holdings, issuer-wise. They indicate the percentage holding in the securities of various issuers as a percentage of net assets. The individual holding in debt instruments issued by a single issuer which is calculated as market price times quantity is divided by the total net assets of the fund.

Just as equity funds are classified based on sectors, the debt portfolios are classified based on type of instrument. The percentage holding in each category is also indicated which will be a sub-total of holdings in each category. The allocation to the various categories differs depending on the type and objective of the fund. The percentage holding in each category indicates whether the fund is true to its objective.

For example in a long-term debt fund, the holdings in money market securities will be lower than in the case of a liquid fund. Liquid funds invest predominantly in money market securities such as commercial papers, certificate of deposits and Treasury bills. Gilt funds invest in G-secs only and income funds primarily invest in corporate bonds.

Illustration: Sample Debt Fund Portfolio

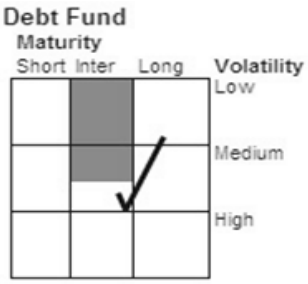
Name Of Issuer	Rating	Market Value (Rs. Lakh)	% To Net Assets
PSU/PFI Bonds		29200.00	33.30 %
LIC Housing Finance Ltd	AAA	15700.00	18.90 %
Infrastructure Development Finance Company Ltd	AA+	13500.00	15.40 %
Private Corporate Securities		27980.00	31.91 %
Reliance Capital Ltd	AAA	8900.00	10.15 %
HDFC Ltd	AAA	3400.00	3.88 %
SREI Equipment Finance Ltd	AA	6700.00	7.64 %
L&T Infrastructure Finance Company Ltd	LAA	6500.00	7.41 %
ICICI Home Finance Company Ltd	LAAA	1000.00	1.14 %
Tata Capital Ltd	LAA+	900.00	1.03 %
IL & FS Ltd	AAAIND	580.00	0.66 %
Pass Through Certificates		3150.00	3.59 %
Credit Asset Trust Series XXXV	AAA(SO)	1600.00	1.82 %
Citi Fleet Trust Series 11	AA+(SO)	1550.00	1.77 %
Government Securities		5900.00	6.73 %
6.07% GOI 2014	Sovereign	5900.00	6.73 %
Treasury Bills		4600.00	5.25 %
364 Days TBILL (MD 08/04/2010)	Sovereign	4600.00	5.25 %
CPs and CDs		11460.00	13.07 %
Punjab National Bank Ltd	PR1+	3000.00	3.42 %
Canara Bank Ltd	P1+	2880.00	3.28 %
Reliance Petroleum Ltd	P1+	3470.00	3.96 %
Corporation Bank ltd	P1+	2110.00	2.41 %
CBLO & Reverse Repo		4300.00	4.90 %
Net Current Assets		1100.00	1.25 %
Total Net Assets		87690.00	100.00 %

Notice the layout of a typical debt fund portfolio. The fund is likely to be an income fund, investing primarily in corporate bonds. It has a small portion in G-Secs and some amount invested in money market securities.

Debt Fund Style Box

To indicate the style features of a debt fund the horizontal axis of a debt fund style box is divided into three maturity categories - short term, intermediate term and long term. The vertical axis is divided into three volatility categories - high, medium and low.

Sample Debt Fund Style Box



Refer the picture above. The portfolio intends to invest in intermediate maturity category with low to medium level of volatility. There is no standardization to the definitions of the maturity of bonds as short, intermediate or long and for the volatility in the portfolio as low, medium or high. It is open to the interpretation of the fund house.

Fixed-income investors looking for safety would confine their debt fund investments to low volatility funds that invest in short- to intermediate-term maturity categories. An investor seeking to implement an interest rate view may choose the combination of medium to high volatility and long-term maturity to hold high-risk, high-yield fund.

Debt Fund Composition

Debt fund managers make choices in the selection and management of the portfolio. Types of securities may be chosen on basis of maturity, such as short term and long term securities. Types of securities may also be chosen in terms of issuer, such as Government securities, corporate bonds, or a combination.

Certain funds may be flexible in terms of defining the portfolio features. In such cases, fund manager may make a choice based on the prevailing market scenario. The return and risk of the fund will depend upon the choices the fund manager makes while choosing securities.

Debt fund literature, such as factsheet, and fund updates provide information on the types of securities exposure limits and risks.

Some of the common practices in debt fund composition are the following:

- Exposure to corporate bonds may be taken to earn higher accrual income in a dynamic bond fund that otherwise uses G-Secs across the yield curve.
- Exposure to money market securities may be included in an income or short term fund, to help keep interest rate volatility down.
- Investment in pass through certificates may be done to earn higher interest income, but the risk of defaults and liquidity increases.
- Investment in government securities in an income fund, allows fund to earn capital appreciation and also benefit from high liquidity.

- Investment in bonds of public sector units and public financial institutions provides for higher income with lower risk.

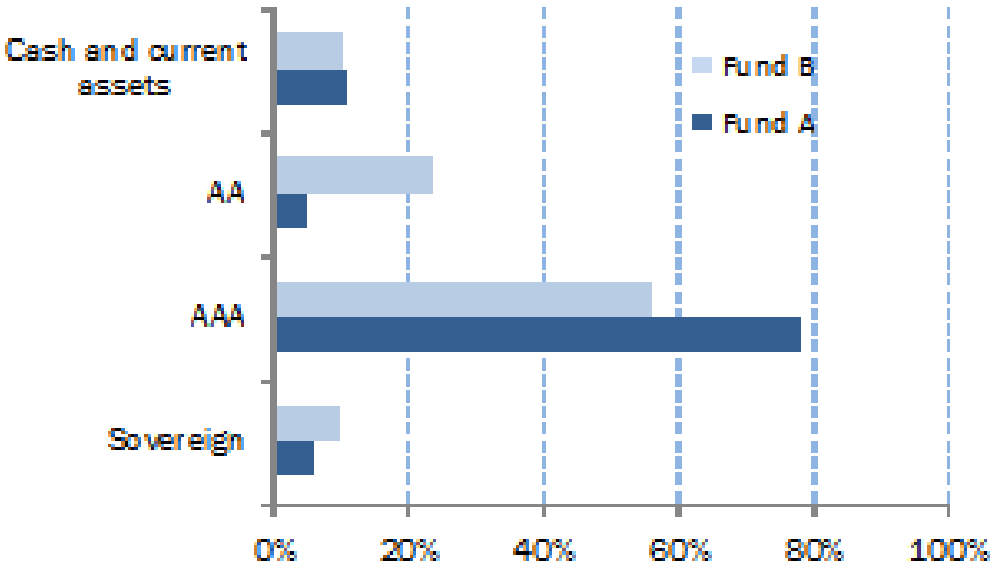
Typically a short-term debt fund will show lower volatility since coupon income is the significant contributor to returns. Long-term fund shows higher volatility because longer-term securities feature greater volatility in prices.

Credit Profile

The credit risk assumed by a debt portfolio can be discerned from the summary rating profile. Rating profile indicates the percentage allocation to the various rating categories. Government securities have no default risk.

Higher the rating of corporate bonds, lower the risk. Cash and equivalents have no credit risk. Higher the percentage of assets in lower rated securities, greater is the default risk in the fund.

Illustration: Comparative Rating Profile



In the picture above, Fund A holds a higher percentage of AAA assets and has a better credit quality, compared to Fund B, which holds a relatively higher proportion in AA rated securities.

Maturity Profile

In the debt markets, securities are available from maturity periods of 1 day to 30 years. The maturity profile of a debt fund provides indication of the extent of interest rate risk in the

fund. Interest rate risk refers to the change in the value of a security due to a change in interest rates. In a debt fund, the interest rate risk or the sensitivity of the price of the bonds to changes in interest rates, is a function of the tenor of the bonds held. Longer the tenor higher will be the changes in price for a change in interest rates. They will make greater gains from an increase in price when interest rates fall and losses from fall in price when interest rates rise.

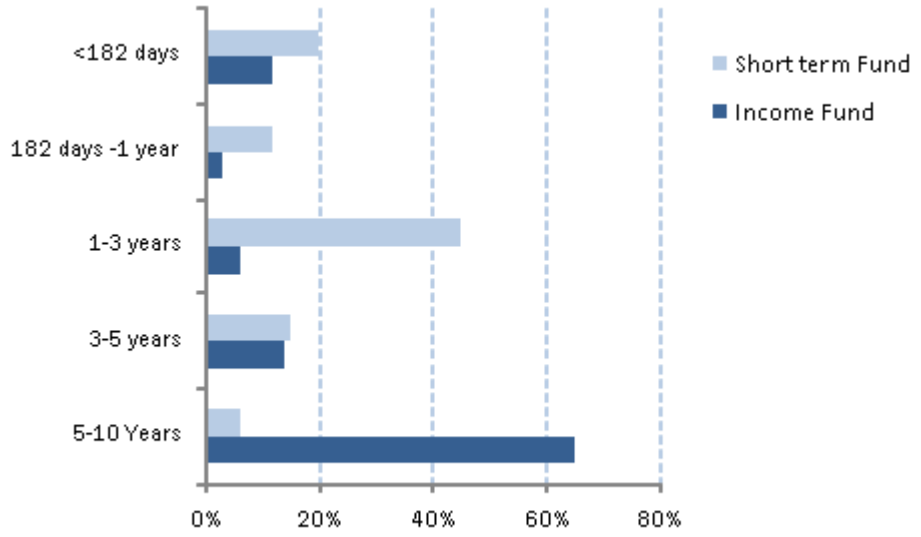
Average maturity, duration and modified duration are the measures of interest rate risk. Higher the numbers, greater is the risk.

Securities with a shorter maturity usually offer lower yields than securities with a longer maturity and they come with lower level of interest rate risk. This is generally true if the yield curve is upward sloping. Take the example of a liquid fund, which consists of very short term securities. It is a low risk, low return fund. A long-term debt security is subject to higher interest rate risk.

The income fund with exposure to securities with maturity greater than 10 years is more risky than an income fund with exposure to securities with maturities in the 3 to 5 year range. While the latter is known as a conservative fund, the former will be considered an aggressive fund.

See the sample maturity profile of two debt funds shown. One is an income fund and the other a short-term fund. The income fund holds securities of higher maturity, while the short-term fund primarily holds securities in the 1 to 3 year maturity bracket. Short-term fund holds a small percentage in long maturity to benefit from interest rate movements. This low exposure to long term maturities makes short term funds less risky. Income funds hold some percentage in very short maturity to manage liquidity.

Illustration: Comparative Maturity Profile



Average Maturity and Duration

Average maturity is the weighted average of the maturities of the individual holdings. Duration is the weighted average maturity, weighted by the cash flows of a security. They are weighted by the market value of the securities to the total net assets of the fund. A mutual fund offers debt funds with varying maturity profiles and duration. In order to enable investors understand the risk of the portfolio and differentiate between the debt funds, the average maturity and duration are disclosed in the factsheet usually in terms of days or years.

Illustration – Average Maturities of Debt Funds

Fund	**Average Maturity (years)**
XYZ Money Manager Fund	0.27
XYZ Treasury Bill Fund	0.58
XYZ Liquidity Fund	0.80
XYZ Short Term Fund	1.78
XYZ Bond Fund	6.41
XYZ Strategic Bond Fund	7.54
XYZ Government Securities Fund	11.53

Notice in the table above that the average maturity of the XYZ Money Manager Fund is the lowest. The average maturity increases with the type of the fund and its investment objective. The Government Securities Fund has a very high average maturity, as it seeks to take advantage of an expected cut in interest rates. The interest rate risk is high in a fund with higher average maturity.

The average maturity or duration could be altered depending upon the market conditions. For example, if the interest rates are expected to fall the fund manager could increase exposure to longer tenor securities. As opposed to this if interest rates are expected to rise, running a higher duration would hurt the performance of the fund.

5.7. Elements of Macro Economic Policy

5.7.1 Gross Domestic Product

Gross Domestic Product (GDP) is the final value of all goods and services produced by a country in a given time period. Rate of growth in GDP is a widely used measure of economic growth.

If a country produced goods and services worth Rs. 100 trillion in a year and the value rose to Rs. 108 trillion in the next year, we can say that the country registered an 8% economic growth.

The value of GDP in rupee terms, computed as the product of price and quantity of goods and services produced is stated with reference to a base year. The price index value is set to 100 for the base year.

GDP can be computed in nominal (at current prices) or real terms (at constant prices). Nominal GDP includes the impact of inflation. Real GDP is computed using prices prevailing in the base year. See nominal and real GDP growth rates in the picture alongside. It is customary to report GDP numbers and growth rates in real terms.

In measuring GDP the following conventions are followed:

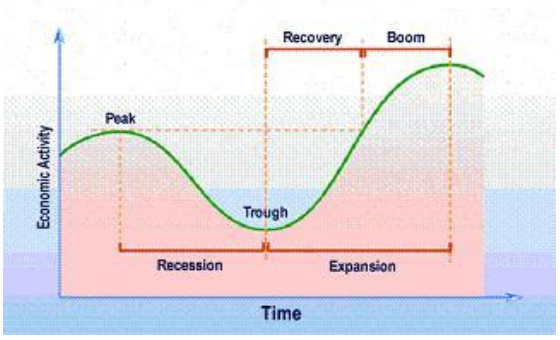
- GDP computation values goods and services at their **market prices** and not cost.
- Products and services having intermediate uses are not counted. The **value of the final product** includes the values of these intermediate goods.
- GDP refers to **output produced in the country**, irrespective of the ownership of the factors of production. For example, the production of a foreign unit in India is included in India's GDP.
- GDP growth is represented as a **real rate**, excluding the impact of inflation.
- GDP is measured on a **time scale**, usually on a year to year basis.

Gross National Product (GNP) measures the final value of all goods and services produced by domestically owned entities, even if such production happens abroad.

5.7.2 Business Cycles

The business cycle is the cyclical pattern of expansion and recession in economic growth around the path of trend growth. GDP is at its trend level when an economy's productive capacity is being fully or highly utilised to achieve maximum output.

In theory, the trend output can be maintained forever if there are no disturbances. The trend itself can rise with population growth and technical innovations. However, swings in public or private expenditures, investment, money supply, or foreign inflows can cause output to decline or expand for significant periods of time. This sets up alternate cycles of recessions and expansions.

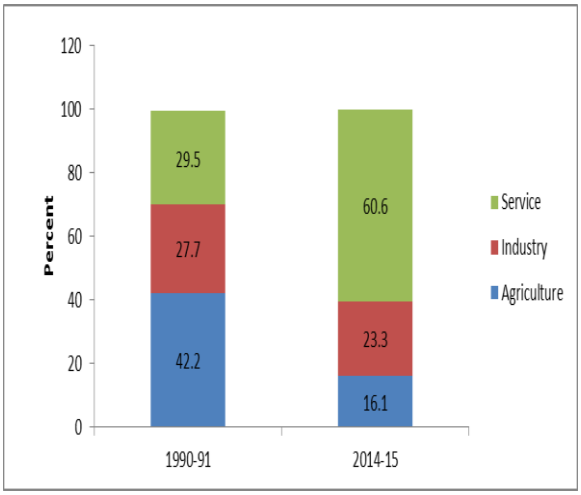


During a recession, growth in sales, production and employment slows down. During expansion, growth is significantly higher than trend rate. A complete recessions-expansion cycle may take a few years. Identification of trend growth rate is critical in mapping out business cycles.

5.7.3 Composition of GDP

GDP is represented in terms of the contribution of the major sectors namely, agriculture, industry and services. These are also known as the primary, secondary and tertiary sectors.

The growth rates in each sector and their contribution to the overall GDP, enables understanding economic growth. In the Indian case, for example, the service sector has been growing at a high rate in the last ten years, and its share in the GDP has also moved up. The contribution of services to GDP is now about 60%, while the share of agriculture has moved down.



The sectoral composition of GDP changes over time as an economy evolves from being

agrarian to industrial and subsequently a service-based economy. The rapid growth of information technology and communication sectors has allowed India to directly transform into a service economy. Not all emerging economies show this trend. In some emerging economies, manufacturing sectors contribute relatively more.

Agricultural output in India has been affected by declining investment and poor yields. Industrial growth has been limited by lack of government initiatives to develop hard infrastructure, absence of efficient and transparent procedures for setting up and running businesses and restrictive labour laws. In contrast, the services sector thrived due to availability of skilled labour, higher incomes and favourable exchange rate.

5.7.4 Index of Industrial Production (IIP)

Industrial performance is estimated mainly on the basis of the index of industrial production (IIP). IIP measures changes in industrial activity with reference to a base year (currently 2004-05).The CSO releases monthly estimates of IIP, as well as YoY and year-to date growth numbers with a 6-week lag.

The IIP measures growth in 22 industry groups classified as industrial sectors and use-based sectors. Mining, manufacturing and electricity are industry sectors; basic goods, capital goods, intermediate goods and consumer goods are used based sectors.

The ability of IIP to track GDP is limited, because it excludes the services sector, which accounts for more than half of GDP. Growth in IIP is more volatile than GDP growth. Since IIP is a monthly index, it suffers from seasonality bias. For instance, it shows peaks in March (financial year end for companies) and during the month preceding the Diwali season when companies increase production in anticipation of higher Diwali sales. Exclusive dependence on IIP to track GDP may result in false predictions. Doubts have been raised about the quality of measurement and coverage of IIP. The following are concerns regarding the quality of IIP:

- Absence of standard estimation techniques to tackle data gaps.
- Inadequate efforts to monitor and include new units.
- Non-representative weighting of items in the basket

IIP is a lead indicator of corporate earnings. IIP numbers measure production and this translates into sales and revenues for companies with a lag. An increase in revenues and margins would encourage investment growth in the sector.

Growth in IIP and revenues of index companies show a positive correlation. This is due to the intuitive relationship between growth in nominal GDP (for which IIP is a proxy) and growth in corporate earnings. As the total nominal value of goods and services produced /

consumed grows, so would the sales, income and profits of the producers of such goods and services.

However, this relationship has to be seen in light of other factors that may impact the translation into revenues for companies. Inflation may force greater allocation of income to essential commodities over others. Rising commodity prices, increasing wage bills and interest costs will further squeeze profit margins for companies.

Other indicators of manufacturing activity include the Purchasing Managers' Index (PMI) of Nikkei and the Quarterly Survey of Professional Forecasters, released by RBI.

5.7.5 Aggregate Demand

An alternate way of understanding economic growth is to view GDP in terms of the different purposes for which domestically produced goods and services are demanded. The sum of total expenditures provides an estimate of how much was demanded and consumed, which by corollary represents how much was produced. We call this the aggregate demand.

The aggregate demand in the economy is computed as:

Private consumption expenditure (C) + Government spending (G) + Investments (I) + Net exports (Exports – Imports) (NX)

This technique of measuring GDP is called the expenditure method. It provides a widely used and easily understood disaggregation of economic output.

Private consumption is the amount spent on goods and services by consumers. Government spending is the amount spent by the government on goods and services.

Investment is the amount invested in creating fixed capital and inventories. This is also known as gross capital formation. Investment creates assets that increase the economy's ability to produce output in the future. Thus it is critical to GDP growth.

Exports are goods produced locally but consumed abroad; imports are goods produced abroad but consumed locally. The difference is net exports.

The drivers of aggregate demand in a country vary with the nature of economic activity and development.

In rapidly growing economies, investment and capital formation support GDP growth significantly (China and India to some extent, are examples of such economies). Export-driven economies, such as Singapore, rely on growth of net exports to improve GDP. For India, since imports continue to grow faster than exports, net export is negative. Growth in India cannot be classified as being export-led.

5.7.6 Current Account Deficit

The current account balance is the difference between total exports and total imports of goods and services. The difference between exports and imports of goods is known as trade balance. Both current and trade account balances are expressed in terms of percentage to GDP, as well as in currency terms.

Emerging economies often run substantial current account deficits (CAD) because of their need to import commodities and other inputs for economic activity. A CAD means that the country is importing more from the rest of the world than it exports to it, so it is a net debtor of foreign currency. The CAD can be managed in two ways. One, foreign inflows on the capital account (such as foreign direct or portfolio investment) can offset the gap in net exports. Two, if capital inflows are insufficient the country's forex reserves have to be run down by the central bank.

India is a net importer of commodities so the CAD depends critically on the exchange rate of the rupee and world oil prices.

5.7.7 Inflation

Inflation is the rate at which the general level of prices for goods and services is rising from one period to another. Inflation reduces purchasing power by reducing the quantity of goods that can be consumed for the same income. Inflation is measured using inflation price indices. Inflation price indices are index numbers of prices for an identified basket of goods. The composition of the basket and weights assigned to each item depend on the objectives of the index. The cost of purchasing the basket in the base year is fixed at 100 and subsequent values are computed at current prices. Inflation rate is the change in the index value Inflation for various items moves differently at the same point in time. Overall inflation would depend on the combined impact of price movements of items in the consumption basket.

Headline inflation refers to the change in the value of all goods in the basket.

Core inflation excludes food and fuel items, because the prices of these items tend to be more volatile, and thus create 'noise' in the headline inflation number. For developed economies food and fuel form 10% to 15% of consumption basket; for developing economies food and fuel form 30% to 40% of the consumption basket. Therefore despite its volatility, headline inflation is relevant in emerging economies like India.

There are three popular indices of inflation. The Wholesale Price Index (WPI) and Consumer Price Index (CPI) are computed from actual price data, while the GDP deflator is statistically derived as the difference between the nominal and real GDP growth rates.

Wholesale price index (WPI) is computed on a monthly basis, using the wholesale prices of a basket of 676 goods. It is the most commonly used measure of inflation.

Consumer price index (CPI) is a retail index, computed on a monthly basis, with a basket representing retail household consumption. From January 2015 a new CPI with 2012 as the base year is being compiled at national as well as state level.

GDP Deflator is the comprehensive national income deflator, statistically derived from national accounts data released by the Central Statistical Organisation (CSO). It is computed with a lag of 9 months and therefore not widely used.

The content and composition of the baskets largely explains the difference between alternative inflation indicators. Consumer items such as food have a higher weight in CPI as compared to WPI, so if food prices are rising, CPI-based inflation will tend to be much higher.

Factors Behind Inflation

Prices of goods and services are determined by demand and supply. So inflation can be caused by demand-side factors (demand-pull inflation) or supply-side factors (cost-push inflation).

High growth in aggregate demand can lead to price increases if supply cannot keep up with demand, a situation referred to as “overheating”. Such inflation can be reduced through policy actions that “cool” demand by reducing money flows in the economy for example, reducing bank credit (interest rate hike) or reducing purchasing power (tax hike).

Supply-side factors such as rise in prices of raw materials or labour lead to inflation. The inability of capacity and productivity to keep pace with demand can also cause inflation. The usual government reaction is to augment supplies by allowing imports or reducing exports. Longer-term solutions lie in augmenting supply through increased capacities, more efficient technology and higher productivity.

5.7.8 Inflation and Monetary Policy Action

Stability in prices removes uncertainty and enables long-term planning and investment decisions by companies. The broad objective of central banks around the world has been to maintain price stability and accelerate economic growth. The tools available to monetary policy makers to achieve their objectives are (i) to affect the money supply in the economy and (ii) to influence the cost of credit.

A tight monetary policy reduces liquidity and increases interest rates. It has a negative impact on both production and consumption and therefore economic growth. An easy or expansionary monetary policy keeps interest costs low and encourages economic activity. The monetary actions of the RBI in the form of rate hikes to combat persistently high

inflation resulted in easing inflation levels from August 2012till May, 2013. But this was at the cost of growth. The GDP numbers for the first quarter of 2013-14 showed further deceleration in private consumption to 1.6% (Y-o-Y) as well as contraction in Gross fixed Capital investments to -1.2%.

Monetary policy is used to control inflation even if it is caused by non-monetary factors. For example, the increase in policy rates in early 2011 was not expected to bring down inflation that was primarily due to supply side issues. However, it did signal RBI's intention to control inflation. Again, in September and October 2013, RBI chose to hike rates in a situation of rising inflation caused by double digit food inflation and fuel inflation resulting from higher crude oil prices as well as the rupee depreciation. The hike in interest rates was driven by the need to manage inflation expectation as also to support the rupee.

5.7.9 Prices and Asset Valuation

Inflation and deflation impact asset valuation and investment decisions in opposite directions.

Deflation increases the value of cash and safe fixed-return investments such as government bonds. During mid-nineties in Japan, prices of benchmark 10-year bonds rose and yields fell, while the equity index declined in response to deflation.

Persistent inflation reduces the real return on financial assets and forces investors to turn to hedges such as gold, oil, agricultural commodities or real estate. Inflation Indexed government securities have returns that are adjusted for inflation losses.

5.7.10 Money Supply Indicators

The monetary stock in the economy is made up of the following:

(a) Currency in circulation

(b) Deposits with RBI

(c) Demand deposits

(d) Time deposits

Reserve Money (M0) is computed as (a) + (b). Reserve money therefore refers to the base money in cash and near cash.

Narrow Money (M1) excludes cash with banks and deposits with RBI from reserve money and includes demand deposits.

Broad Money (M3) is narrow money + time deposits.

RBI announces indicative target rates of M3 growth based on its assessment of deposit and credit growth.

5.7.11 Transmission of Policy Initiatives

The monetary policy actions of the central bank are expected to be transmitted to the economy in the form of lower rates and enhanced credit to the borrowers in case of easy monetary stance, or lower credit availability at higher rates in case of a tight policy.

However, transmission mechanisms can be delayed or even ineffective if banks do not match the actions of the central bank with changes in lending and deposit rates. For instance, during March-November 2010 RBI signalled higher interest rates by hiking repo rate and reserve ratios, but banks did not increase their deposit rates. Simultaneously credit off take from banks grew at about 25% y-o-y in 2010, reflecting a recovery in industrial growth. As a result the credit-deposit gap widened sharply, and narrowed only after deposit rates were increased in January 2011. In April 2012, the RBI announced a 50 bps cut in repo rates in response to slowing economic growth. However, markets chose to take cognizance of RBI's statement that further rate cuts may not happen in the near future and this combined with India being put on rating watch by S&P kept market yields up despite the policy action. It took liquidity easing action from RBI in the form of open market operation for the yields to start falling.

The combination of repo rate cuts and liquidity easing measures by RBI, such as open market operations and CRR cuts from end- 2012, combined with greater FII flows into G-secs, led to a close to 100 bps drop in long term yields by May 2013. Long-term debt portfolios benefited from mark to market gains during this period.

5.7.12 Government Finances

Government spending has a positive impact on growth provided government deficits are within reasonable limits. An increase in expenditure without a matching rise in revenue collection can lead to large deficits, which are met through market borrowings.

The government publishes deficit numbers in the annual economic survey and estimated deficits in its budget proposals.

High fiscal deficits may be worthwhile in the short-run if government spending boosts growth, but fiscal prudence has to be followed in the long run. Government can affect GDP through fiscal policy. Fiscal policy refers to the policies of the government regarding its expenditure, investment spending and taxation. An expansionary fiscal policy increases government spending and/or reduces taxation. A contraction in fiscal policy does exactly the opposite.

Fiscal policy can be an effective tool for managing output. A reduction in personal or corporate income tax affects aggregate demand by increasing the amount of income available for consumption or investment. An increase in government spending directly increases demand. In contrast, a rise in income tax or cutbacks in government expenditure reduces demand.

A high fiscal deficit has the effect of crowding out other borrowers, such as companies, from the market. Large government borrowings push up market yields. The weighted average yield of government borrowings moves up with an increasing fiscal deficit and higher supply of government securities in the markets. For example, an indication of a higher than budgeted fiscal deficit in India in September 2011, pushed yields on the 10-year G-sec up to 9%, leading to mark to market losses in long-term debt portfolios. RBI stepped in with open market operations to ease liquidity and yields softened in response to this action as well as RBI indicating an easing of rates to support growth.

The high interest cost burden will take a large chunk of government revenues and leave very little for future capital formation.

5.8. Behavioral Biases in Investment Decision Making

Creating and managing a portfolio at the level of the fund manager or the investor requires investment decisions to be made on which asset classes to invest in, how to invest, timing of entry and exits and reviewing and rebalancing the portfolio. These decisions have to be based on the analysis of available information so that they reflect the expected performance and risks associated with the investment. Very often the decisions are influenced by behavioural biases in the decision maker, which leads to less than optimal choices being made. Some of the well documented biases that are observed in decision making are

Optimism or Confidence Bias: Investors cultivate a belief that they have the ability to outperform the market based on some investing successes. Such winners are more often than not short-term in nature and may be the outcome of chance rather than skill. If investors do not recognize the bias, they will continue to make their decisions based on what they feel is right than on objective information.

Familiarity Bias: This bias leads investors to choose what they are comfortable with. This may be asset classes they are familiar with, stocks or sectors that they have greater information about and so on. Investors holding an only real estate portfolio or a stock portfolio concentrated in shares of a particular company or sector are demonstrating this bias. It leads to concentrated portfolios that may be unsuitable for the investor's

requirements and feature higher risk of exposure to the preferred investment. Since other opportunities are avoided, the portfolio is likely to be underperforming.

Anchoring: Investors hold on to some information that may no longer be relevant, and make their decisions based on that. New information is labelled as incorrect or irrelevant and ignored in the decision making process. Investors who wait for the 'right price' to sell even when new information indicate that the expected price is no longer appropriate , are exhibiting this bias. For example, they may be holding on to losing stocks in expectation of the price regaining levels that are no longer viable given current information, and this impacts the overall portfolio returns.

Loss Aversion: The fear of losses leads to inaction. Studies show that the pain of loss is twice as strong as the pleasure they felt at a gain of a similar magnitude. Investors prefer to do nothing despite information and analysis favouring a particular action that in the mind of the investor may lead to a loss. Holding on to losing stocks, avoiding riskier asset classes like equity when there is a lot of information and discussion going around on market volatility are manifestations of this bias. In such situations investors tend to frequently evaluate their portfolio's performance, and any short-term loss seen in the portfolio makes inaction the preferred strategy.

Herd Mentality: This bias is an outcome of uncertainty and a belief that others may have better information, which leads investors to follow the investment choices that others make. Such choices may seem right and even be justified by short-term performance, but often lead to bubbles and crashes. Small investors keep watching other participants for confirmation and then end up entering when the markets are over heated and poised for correction.

Recency Bias: The impact of recent events on decision making can be very strong. This applies equally to positive and negative experiences. Investors tend to extrapolate the event into the future and expect a repeat. A bear market or a financial crisis lead people to prefer safe assets. Similarly a bull market make people allocate more than what is advised to risky assets. The recent experience overrides analysis in decision making.

Choice Paralysis: The availability of too many options for investment can lead to a situation of not wanting to evaluate and make the decision. Too much of information also leads to a similar outcome on taking action.

These are some biases that commonly observed not only in investment decision making. Professional fund managers have systems and processes in place to reduce or negate the effect of such bias. The checks and balances exist from the stage of gathering information, to interpretation of the information and decision making on entry and exits. Individual investors can also reduce the effect of such biases by adopting a few techniques. As far as

possible the focus should be on data and what it is saying. Setting in place automated and process-oriented investing and reviewing methods can help biases such as inertia and inaction. Facility such as systematic investing helps here. Over evaluation can be avoided by doing reviews to a schedule. Investing strategies such as value investing, which is contrarian in nature; helps avoid the effect of herd mentality. It is always good to have an adviser the investor can trust who will take a more objective view of the investor's finances in making decisions and will also help prevent biases from creeping in.

Sample Questions

1. **Which of the following is NOT considered in the calculation of RoI?**
   a. Realized capital appreciation
   b. Periodic interest
   c. Expected dividend
   d. Unrealized capital appreciation

2. **Which of these investments is most likely to be affected by inflation?**
   a. Real estate
   b. Equity shares
   c. Bank deposits
   d. Gold

3. **Which of these investments is seen as riskiest?**
   a. Investment with low standard deviation
   b. Investment with high credit rating
   c. Investment with low market volatility
   d. Investment with high beta

4. **The benefits of diversification in a portfolio is seen in the form of**
   a. Eliminating risk
   b. Maximising returns
   c. Guaranteeing returns
   d. Enhancing risk adjusted returns

5. **Read the following caselet and answer the questions that follow:**

Mr. C is a 45 year single earning member of his family with a good income. He is saving for different financial goals, some of which are due for funding now. He has a home loan and car loan that he is servicing.

   a. How would you best categorize Mr. C's risk profile?
      i. Conservative
      ii. Moderate
      iii. Liquidity seeker
      iv. Aggressive

   b. What are the assets that will be most suitable for Mr. C given his situation?
      i. Primarily growth with some income-oriented assets
      ii. Primarily liquid assets
      iii. Primarily growth assets

iv. Combination of liquid and income-oriented assets

c. Mr C. has to park the funds from fixed deposits that have matured for a short period till it will be used for his daughter's education. What will you suggest as a suitable investment option?

i. Large-cap equity, to capture growth but with lower risk
ii. Current account, to enable liquidity
iii. Alternative investments, to increase the corpus
iv. Short-term fixed deposit, to ensure liquidity and some returns

6. Which of the following will define the risk and return features of a mutual fund scheme?

a. Market cycles and portfolio selection
b. Asset class performance and investment style adopted
c. Investment objective and asset class chosen
d. Economic cycle and fund manager expertise

CHAPTER 6: REGULATORY AND COMPLIANCE ASPECTS

LEARNING OBJECTIVES:

After studying this chapter, you should know about:

- Salient features of SEBI (Investment Advisers) Regulations, 2013
- Investor Redressal Mechanism in capital markets, banking and insurance
- Some important regulations relating to insurance, pension funds, alternate investments

6.1. SEBI (Investment Advisers) Regulations 2013

The regulations came into effect on April 21, 2013. Some of the important definitions and key clauses under these regulations are as follows:

6.1.1 Definitions

- "financial planning" shall include analysis of clients' current financial situation, identification of their financial goals, and developing and recommending financial strategies to realize such goals;

- "investment advice" means advice relating to investing in, purchasing, selling or otherwise dealing in securities or investment products, and advice on investment portfolio containing securities or investment products, whether written, oral or through any other means of communication for the benefit of the client and shall include financial planning:

- Provided that investment advice given through newspaper, magazines, any electronic or broadcasting or telecommunications medium, which is widely available to the public shall not be considered as investment advice for the purpose of these regulations;

- "investment adviser" means any person, who for consideration, is engaged in the business of providing investment advice to clients or other persons or group of persons and includes any person who holds out himself as an investment adviser, by whatever name called;

- "representative" means an employee or an agent of an investment adviser who renders investment advice on behalf of that investment adviser.

6.1.2 Registration

No person shall act as an investment adviser or hold itself out as an investment adviser unless he has obtained a certificate of registration from the Board under these regulations:

Provided that a person acting as an investment adviser immediately before the commencement of these regulations may continue to do so for a period of six months from such commencement or, if it has made an application for a certificate within the said period of six months, till the disposal of such application.

6.1.3 Exemption from Registration

The following persons shall not be required to seek registration, subject to the fulfilment of the conditions stipulated—

a. Any person who gives general comments in good faith in regard to trends in the financial or securities market or the economic situation where such comments do not specify any particular securities or investment product;

b. Any insurance agent or insurance broker who offers investment advice solely in insurance products and is registered with Insurance Regulatory and Development Authority for such activity;

c. Any pension advisor who offers investment advice solely on pension products and is registered with Pension Fund Regulatory and Development Authority for such activity;

d. Any distributor of mutual funds, who is a member of a self regulatory organization recognized by the Board or is registered with an association of asset management companies of mutual funds, providing any investment advice to its clients incidental to its primary activity;

e. Any advocate, solicitor or law firm, who provides investment advice to their clients, incidental to their legal practise;

f. Any member of Institute of Chartered Accountants of India, Institute of Company Secretaries of India, Institute of Cost and Works Accountants of India, Actuarial Society of India or any other professional body as may be specified by the Board, who provides investment advice to their clients, incidental to his professional service;

g. Any stock broker or sub-broker registered under SEBI (Stock Broker and Sub Broker)Regulations, 1992, portfolio manager registered under SEBI (Portfolio Managers) Regulations, 1993 or merchant banker registered under SEBI(Merchant Bankers) Regulations, 1992, who provides any investment advice to its clients incidental to their primary activity:

Provided that such intermediaries shall comply with the general obligation(s) and responsibilities as specified in Chapter III of these regulations:

Provided further that existing portfolio manager offering only investment advisory services may apply for registration under these regulations after expiry of his current certificate of registration as a portfolio manager;

h. Any fund manager, by whatever name called of a mutual fund, alternative investment fund or any other intermediary or entity registered with the Board;

i. Any person who provides investment advice exclusively to clients based out of India:

Provided that persons providing investment advice to Non-Resident Indian or Person of Indian Origin shall fall within the purview of these regulations;

j. Any representative and partner of an investment adviser which is registered under these regulations:

Provided that such representative and partner shall comply with regulation 7 of these regulations (which relates to qualification and certification requirements discussed later in this chapter)

k. Any other person as may be specified by the Board.

6.1.4 Qualification and Certification Requirement

1) An individual registered as an investment adviser under these regulations and partners and representatives of an investment adviser registered under these regulations offering investment advice shall have the following minimum qualifications, at all times:

   a) A professional qualification or post-graduate degree or post graduate diploma in finance, accountancy, business management, commerce, economics, capital market, banking, insurance or actuarial science from a university or an institution recognized by the central government or any state government or a recognized foreign university or institution or association; or

   b) A graduate in any discipline with an experience of at least five years in activities relating to advice in financial products or securities or fund or asset or portfolio management.

2) An individual registered as an investment adviser and partners and representatives of investment advisers registered under these regulations offering investment advice shall have, at all times, a certification on financial planning or fund or asset or portfolio management or investment advisory services:

a) from NISM; or

b) from any other organization or institution including Financial Planning Standards Board India or any recognized stock exchange in India provided that such certification is accredited by NISM:

Provided that the existing investment advisers seeking registration under these regulations shall ensure that their partners and representatives obtain such certification within two years from the date of commencement of these regulations:

Provided further that fresh certification must be obtained before expiry of the validity of the existing certification to ensure continuity in compliance with certification requirements.

6.1.5 Capital Adequacy

1) Investment advisers which are body corporate shall have a net worth of not less than twenty five lakh rupees.

   "Networth" means the aggregate value of paid up share capital plus free reserves (excluding reserves created out of revaluation) reduced by the aggregate value of accumulated losses, deferred expenditure not written off, including miscellaneous expenses not written off, and capital adequacy requirement for other services offered by the advisers in accordance with the applicable rules and regulations.

2) Investment advisers who are individuals or partnership firms shall have net tangible assets of value not less than rupees one lakh:

   Provided that existing investment advisers shall comply with the capital adequacy requirement within one year from the date of commencement of these regulations.

6.1.6 Validity of Registration

The certificate of registration granted under these regulations shall be valid for a period of five years from the date of its issue.

6.1.7 Conditions of Certificate

The certificate granted under these regulations shall, inter alia, be subject to the following conditions:-

a. the investment adviser shall abide by the provisions of the Act and these regulations;

b. the investment adviser shall forthwith inform the Board in writing, if any information or particulars previously submitted to the Board are found to be false or misleading in any

material particular or if there is any material change in the information already submitted;

c. the investment adviser, not being an individual, shall include the words‘ investment adviser’ in its name:

Provided that if the investment advisory service is being provided by a separately identifiable department or division or a subsidiary, then such separately identifiable department or division or subsidiary shall include the words ‘investment adviser’ in its name;

d. individuals registered as investment advisers shall use the term ‘investment adviser’ in all their correspondences with their clients.

6.1.8 General Responsibility

1) An investment adviser shall act in a fiduciary capacity towards its clients and shall disclose all conflicts of interests as and when they arise.

2) An investment adviser shall not receive any consideration by way of remuneration or compensation or in any other form from any person other than the client being advised, in respect of the underlying products or securities for which advice is provided.

3) An investment adviser shall maintain an arms-length relationship between its activities as an investment adviser and other activities.

4) An investment adviser which is also engaged in activities other than investment advisory services shall ensure that its investment advisory services are clearly segregated from all its other activities, in the manner as prescribed hereunder.

5) An investment adviser shall ensure that in case of any conflict of interest of the investment advisory activities with other activities, such conflict of interest shall be disclosed to the client.

6) An investment adviser shall not divulge any confidential information about its client, which has come to its knowledge, without taking prior permission of its clients, except where such disclosures are required to be made in compliance with any law for the time being in force.

7) An investment advisor shall not enter into transactions on its own account which is contrary to its advice given to clients for a period of fifteen days from the day of such advice.

Provided that during the period of such fifteen days, if the investment adviser is of the opinion that the situation has changed, then it may enter into such a transaction on its own account after giving such revised assessment to the client at least 24 hours in advance of entering into such transaction.

8) An investment advisor shall follow Know Your Client procedure as specified by the Board from time to time.

9) An investment adviser shall abide by Code of Conduct (detailed later in this Chapter)

10) An investment adviser shall not act on its own account, knowingly to sell securities or investment products to or purchase securities or investment product from a client.

11) In case of change in control of the investment adviser, prior approval from the Board shall be taken.

12) Investment advisers shall furnish to the Board information and reports as may be specified by the Board from time to time.

13) It shall be the responsibility of the Investment Adviser to ensure that its representatives and partners, as applicable, comply with the certification and qualification requirements at all times.

6.1.9 Suitability

Investment adviser shall ensure that,-

a. All investments on which investment advice is provided is appropriate to the risk profile of the client;

b. It has a documented process for selecting investments based on client's investment objectives and financial situation;

c. It understands the nature and risks of products or assets selected for clients;

d. It has a reasonable basis for believing that a recommendation or transaction entered into:

   i. meets the client's investment objectives;

   ii. is such that the client is able to bear any related investment risks consistent with its investment objectives and risk tolerance;

   iii. is such that the client has the necessary experience and knowledge to understand the risks involved in the transaction.

e. Whenever a recommendation is given to a client to purchase of a particular complex financial product, such recommendation or advice is based upon a reasonable assessment that the structure and risk reward profile of financial product is consistent with clients experience, knowledge, investment objectives, risk appetite and capacity for absorbing loss.

6.1.10 Disclosures to Clients

1) An investment adviser shall disclose to a prospective client, all material information about itself including its business, disciplinary history, the terms and conditions on which it offers advisory services, affiliations with other intermediaries and such other information as is necessary to take an informed decision on whether or not to avail its services.

2) An investment adviser shall disclose to its client, any consideration by way of remuneration or compensation or in any other form whatsoever, received or receivable by it or any of its associates or subsidiaries for any distribution or execution services in respect of the products or securities for which the investment advice is provided to the client.

3) An investment adviser shall, before recommending the services of a stock broker or other intermediary to a client, disclose any consideration by way of remuneration or compensation or in any other form whatsoever, if any, received or receivable by the investment adviser, if the client desires to avail the services of such intermediary.

4) An investment adviser shall disclose to the client its holding or position, if any, in the financial products or securities which are subject matter of advice.

5) An investment adviser shall disclose to the client any actual or potential conflicts of interest arising from any connection to or association with any issuer of products/securities, including any material information or facts that might compromise its objectivity or independence in the carrying on of investment advisory services.

6) An investment adviser shall, while making an investment advice, make adequate disclosure to the client of all material facts relating to the key features of the products or securities, particularly, performance track record.

7) An investment adviser shall draw the client's attention to the warnings, disclaimers in documents, advertising materials relating to an investment product which it is recommending to the client.

6.1.11 Maintenance of Records

1) An investment adviser shall maintain the following records,-

a. Know Your Client records of the client;

b. Risk profiling and risk assessment of the client;

c. Suitability assessment of the advice being provided;

d. Copies of agreements with clients, if any;

e. Investment advice provided, whether written or oral;

f. Rationale for arriving at investment advice, duly signed and dated;

g. A register or record containing list of the clients, the date of advice, nature of the advice, the products/securities in which advice was rendered and fee, if any charged for such advice.

2) All records shall be maintained either in physical or electronic form and preserved for a minimum period of five years:

   Provided that where records are required to be duly signed and are maintained in electronic form, such records shall be digitally signed.

3) An investment adviser shall conduct yearly audit in respect of compliance with these regulations from a member of Institute of Chartered Accountants of India or Institute of Company Secretaries of India.

6.1.12 Appointment of Compliance Officer

An investment adviser which is a body corporate or a partnership firm shall appoint a compliance officer who shall be responsible for monitoring the compliance by the investment adviser in respect of the requirements of the Act, regulations, notifications, guidelines, instructions issued by the Board.

6.1.13 Redressal of Client Grievances

1) An investment adviser shall redress client grievances promptly.

2) An investment adviser shall have adequate procedure for expeditious grievance redressal.

3) Client grievances pertaining to financial products in which investments have been made based on investment advice, shall fall within the purview of the regulator of such financial product.

4) Any dispute between the investment adviser and his client may be resolved through arbitration or through Ombudsman authorized or appointed for the purpose by any regulatory authority, as applicable.

6.1.14 Segregation of execution services

Investment advisers which are banks, NBFCs and body corporate providing distribution or execution services to their clients shall keep their investment advisory services segregated from such activities:

Provided that such distribution or execution services can only be offered subject to the following:

a. The client shall not be under any obligation to avail the distribution or execution services offered by the investment adviser.

b. The investment adviser shall maintain arms-length relationship between its activities as investment adviser and distribution or execution services.

c. All fees and charges paid to distribution or execution service providers by the client shall be paid directly to the service providers and not through the investment adviser.

6.1.15 Code of Conduct for Investment Advisers

1) **Honesty and fairness:** An investment adviser shall act honestly, fairly and in the best interests of its clients and in the integrity of the market.

2) **Diligence:** An investment adviser shall act with due skill, care and diligence in the best interests of its clients and shall ensure that its advice is offered after thorough analysis and taking into account available alternatives.

3) **Capabilities:** An investment adviser shall have and employ effectively appropriate resources and procedures which are needed for the efficient performance of its business activities.

4) **Information about clients:** An investment adviser shall seek from its clients, information about their financial situation, investment experience and investment objectives relevant to the services to be provided and maintain confidentiality of such information.

5) **Information to its clients:** An investment adviser shall make adequate disclosures of relevant material information while dealing with its clients.

6) **Fair and reasonable charges:** An investment adviser advising a client may charge fees, subject to any ceiling as may be specified by the Board, if any. The investment adviser shall ensure that fee charged to the client is fair and reasonable.

7) **Conflicts of interest:** An investment adviser shall try to avoid conflicts of interest as far as possible and when they cannot be avoided, it shall ensure that appropriate disclosures are made to the clients and that the clients are fairly treated.

8) **Compliance:** An investment adviser including its representative(s) shall comply with all regulatory requirements applicable to the conduct of its business activities so as to promote the best interests of clients and the integrity of the market.

9) **Responsibility of senior management:** The senior management of a body corporate which is registered as investment adviser shall bear primary responsibility for ensuring the maintenance of appropriate standards of conduct and adherence to proper procedures by the body corporate.

The above are the minimum standards of code of conduct laid down by SEBI. The self-regulatory organisation for investment advisers, as and when appointed, will be tasked with the responsibility of laying down more detailed standards of code of conduct.

6.2. Redressal in Capital Market

SEBI as regulator of the capital market has taken various measures for investor protection. Delegated redressal mechanisms have been put in place. For instance, investors having a grievance related to a transaction in a stock exchange can approach the Investor Services Centre (ISC) of the stock exchange. Complaints can be filed online or physically. The ISC resolves queries of investors. The arbitration mechanism of the stock exchange is also available, for quasi-judicial settlement of disputes. These investor facilities are available at various centres across the country.

Similarly, for mutual fund investments, the Board of Trustees of the mutual fund can be approached, if the investor finds that queries are not resolved by the asset management company. The offer document of mutual fund schemes provide data on the number of complaints received by the mutual fund and those that are not yet redressed. In extreme cases, SEBI does not permit the mutual fund to launch new schemes.

If the specific company or intermediary against who the investor has a complaint does not respond, or if the response is unsatisfactory, the investor can call SEBI's toll free number (currently, these are 1800 266 7575 or 1800 22 7575) for assistance.

SEBI Complaints Redress System (SCORES) offers an online facility (www.sebi.gov.in) for investors to file their complaints against any listed company (issue or transfer of securities or non-payment of dividend) or intermediary registered with SEBI. Besides the investor

details, the system captures details of the complaint in upto 1000 words. A pdf file of upto 1 mb can also be attached as supporting document.

The following complaints are not addressed in SCORES:

- Complaints that are incomplete or not specific
- Allegations without supporting documents
- Offering suggestions or seeking guidance/explanation
- Seeking explanation for non-trading of shares or illiquidity of shares
- Not satisfied with trading price of the shares of the companies
- Non-listing of shares of private offer
- Disputes arising out of private agreement with companies/intermediaries

Further, SEBI does not deal with the following complaints:

- Complaints against unlisted/delisted/wound up/liquidated/sick companies
- Complaints that are sub-judice (relating to cases which are under consideration by court of law, quasi-judicial proceedings etc.)
- Complaints falling under the purview of other regulatory bodies.

SEBI examines the complaint to confirm that it falls within its purview. It then forwards the complaint to the concerned entity. The entity is required to respond with an Action Taken Report within 30 days. Investor can check the status of the complaint online.

These are alternate dispute redressal mechanisms to ensure easy, quick and inexpensive resolution of problems. The investor has the option to approach the relevant court. The law of limitation, which sets a time limit for different types of complaints, needs to be considered. The judicial (court) process will need to be initiated within the time limit provided in the law of limitation.

6.3. Redressal in Banking

In banking, a similar format exists. Reserve Bank of India has set up the Banking Codes and Standards Board of India (BCSBI) as an independent autonomous watchdog to ensure that customers get fair treatment in their dealings with Banks. The BCSBI has published the

"Code of Banks' Commitments to Customers "which sets minimum standards of banking practice and benchmarks in customer service for banks to follow.

Most banks are members of the BCSBI and have thus voluntarily adopted the Code as their Fair Practice Code in dealings with their customers. The complete copy of the Code is available at http://www.bcsbi.org.in/Code_of_Banks.html

Each bank has a customer redressal department that handles issues that customers have against the bank. Customers can file complaints with this department. If customer is not satisfied with the response, he can approach banking ombudsmen, appointed by Reserve Bank of India in various locations across the country.

6.4. Regulation relating to insurance

The insurance sector in India is governed by the Insurance Regulatory and Development Authority Act, 1999, the Insurance Act, 1938, the Life Insurance Corporation Act, 1956 and the General Insurance Business (Nationalization) Act, 1972.

Under the act, "intermediary or insurance intermediary "includes insurance brokers, reinsurance brokers, insurance consultants, surveyors and loss assessors.

The Authority or an officer authorised by it in this behalf shall, in the manner determined by the regulations made by the Authority and on payment of the fees determined by the regulations made by the Authority, issue to any person making an application in the manner determined by the regulations, and not suffering from any of the disqualifications herein mentioned, a licence to act as an intermediary or an insurance intermediary under this Act:

The disqualifications mentioned in the Act are:-

a. that the person is a minor;

b. that he is found to be of unsound mind by a court of competent jurisdiction;

c. that he has been found guilty of criminal misappropriation or criminal breach of trust or cheating or forgery or an abetment of or attempt to commit any such office by a court of competent jurisdiction:

   Provided that, where at least five years have elapsed since the completion of the sentence imposed on any person in respect of any such offence, the Authority shall ordinarily declare in respect of such person that his conviction shall cease to operate as a disqualification under this clause;

d. that in the course of any judicial proceedings relating to any policy of insurance of the winding up of an insurance company or in the course of an investigation of the affairs of an insurer it has been found that he has been guilty of or has knowingly participated in or connived at any fraud dishonestly or misrepresentation against an insurer or an insured;

e. that he does not possess the requisite qualifications and practical training for a period not exceeding twelve months, as may be specified by the regulations made by the Authority in this behalf;

f. that he has not passed such examinations as may be specified by the regulations made by the Authority in this behalf;

g. that he violates the code of conduct as may be specified by the regulations made by the Authority.

Insurance is distributed in India through various channels. Insurance agents are individuals who represent a single insurance company. Corporate agents are non-individuals who represent a single insurance company. Composite insurance agent is an insurance agent who holds a licence to act as an insurance agent for a life insurer and a general insurer.

Insurance brokers represent the insurance buyer. They can deal with any number of insurance companies in order to give the insurance buyer the best deal.

As per section 41 of the Insurance Act, 1938, no person shall allow or offer to allow, either directly or indirectly, as an inducement to any person to take out or renew or continue an insurance in respect of any kind of risk relating to lives or property in India, any rebate of the whole or part of the commission payable or any rebate of the premium shown on the policy, nor shall any person taking out or renewing or continuing a policy accept any rebate, except such rebate as may be allowed in accordance with the published prospectuses or tables of the insurer:

Provided that acceptance by an insurance agent of commission in connection with a policy of life insurance taken out by himself on his own life shall not be deemed to be acceptance of a rebate of premium within the meaning of this sub- section if at the time of such acceptance the insurance agent satisfies the prescribed conditions establishing that he is a bona fide insurance agent employed by the insurer.

Insurance agents need to comply with the following code of conduct:

i. Every insurance agent shall,---

   a) identify himself and the insurance company of whom he is an insurance agent;

b) disclose his licence to the prospect on demand;

c) disseminate the requisite information in respect of insurance products offered for sale by his insurer and take into account the needs of the prospect while recommending a specific insurance plan;

d) disclose the scales of commission in respect of the insurance product offered for sale, if asked by the prospect;

e) indicate the premium to be charged by the insurer for the insurance product offered for sale;

f) explain to the prospect the nature of information required in the proposal form by the insurer, and also the importance of disclosure of material information in the purchase of an insurance contract;

g) bring to the notice of the insurer any adverse habits or income inconsistency of the prospect, in the form of a report (called "Insurance Agent's Confidential Report") along with every proposal submitted to the insurer, and any material fact that may adversely affect the underwriting decision of the insurer as regards acceptance of the proposal, by making all reasonable enquiries about the prospect;

h) inform promptly the prospect about the acceptance or rejection of the proposal by the insurer;

i) obtain the requisite documents at the time of filing the proposal form with the insurer; and other documents subsequently asked for by the insurer for completion of the proposal;

j) render necessary assistance to the policyholders or claimants or beneficiaries in complying with the requirements for settlement of claims by the insurer;

k) advise every individual policyholder to effect nomination or assignment or change of address or exercise of options, as the case may be, and offer necessary assistance in this behalf, wherever necessary;

ii. No insurance agent shall,----

a) solicit or procure insurance business without holding a valid licence;

b) induce the prospect to omit any material information in the proposal form;

c) induce the prospect to submit wrong information in the proposal form or documents submitted to the insurer for acceptance of the proposal;

d) behave in a discourteous manner with the prospect;

e) interfere with any proposal introduced by any other insurance agent;

f) offer different rates, advantages, terms and conditions other than those offered by his insurer;

g) demand or receive a share of proceeds from the beneficiary under an insurance contract;

h) force a policyholder to terminate the existing policy and to effect a new proposal from him within three years from the date of such termination;

i) have, in case of a corporate agent, a portfolio of insurance business under which the premium is in excess of fifty percent of total premium procured, in any year, from one person (who is not an individual) or one organization or one group of organizations;

j) apply for fresh licence to act as an insurance agent, if his licence was earlier cancelled by the designated person, and a period of five years has not elapsed from the date of such cancellation;

k) become or remain a director of any insurance company;

iii. Every insurance agent shall, with a view to conserve the insurance business already procured through him, make every attempt to ensure remittance of the premiums by the policyholders within the stipulated time, by giving notice to the policyholder orally and in writing;

Any person who is aggrieved by the service levels or a decision of an insurance company needs to first write to the insurance company. Insurance companies have Customer Redressal Forums for the purpose.

If the insured is not happy with the response of the insurance company to the complaint, the insurance ombudsman can be approached. IRDA appoints insurance ombudsmen for different geographies. This is an inexpensive avenue for the insurance buyer to have the complaint redressed.

IRDA also offers the facility of online registration of policy holders' complaints through its Integrated Grievance Management System (IGMS) in its website (www.irda.gov.in). The status of the complaints can also be tracked online.

If the insurance buyer is not happy with the decision of the ombudsman, then the normal judicial process through courts as well as under the Consumer Protection Act, 1986 is available.

6.5. Regulation relating to Pension Funds

The Workbook for NISM-Series-X-A: Investment Adviser (Level 1) Certification Examination discusses the role of the Pension Fund Regulatory and Development Authority (PFRDA), the structure of National Pension System (NPS) and its various products. The Pension Fund Regulatory and Development Authority Bill (PFRDA), 2011 was passed in Parliament and became an act in September 2013. This has given statutory power to PFRDA as regulator of the pension sector in the country.

Some of the changes incorporated in the recent legislation are as follows:

a) The subscriber seeking minimum assured returns shall be allowed to opt for investing his funds in such scheme providing minimum assured returns as may be notified by the Authority;

b) Withdrawals will be permitted from the individual pension account subject to the conditions, such as, purpose, frequency and limits, as may be specified by the regulations (earlier, withdrawal from Tier 1 accounts was restricted);

c) The foreign investment in the pension sector is set at 26% or such percentage as may be approved for the Insurance Sector, whichever is higher;

d) At least one of the pension fund managers shall be from the public sector;

e) To establish a vibrant Pension Advisory Committee with representation from all major stakeholders to advise PFRDA on important matters of framing of regulations under the PFRDA Act.

6.6. Regulation relating to Alternate Investment Schemes

Mutual Funds are regulated by the SEBI (Mutual Funds) Regulations, 1996. With a view to regulate other funds SEBI introduced the Securities and Exchange Board of India (Alternate Investment Funds) Regulations, 2012.

Under the regulations, “Alternative Investment Fund” means any fund established or incorporated in India in the form of a trust or a company or a limited liability partnership or a body corporate which,-

i. is a privately pooled investment vehicle which collects funds from investors, whether Indian or foreign, for investing it in accordance with a defined investment policy for the benefit of its investors; and

ii. is not covered under the Securities and Exchange Board of India (Mutual Funds) Regulations, 1996, Securities and Exchange Board of India (Collective Investment Schemes) Regulations, 1999 or any other regulations of the Board to regulate fund management activities:

Provided that the following shall not be considered as Alternative Investment Fund for the purpose of these regulations,-

i. family trusts set up for the benefit of 'relatives' as defined under Companies Act, 1956;

ii. ESOP Trusts set up under the Securities and Exchange Board of India (Employee Stock Option Scheme and Employee Stock Purchase Scheme), Guidelines, 1999 or as permitted under Companies Act, 1956;

iii. employee welfare trusts or gratuity trusts set up for the benefit of employees;

iv. 'holding companies' within the meaning of Section 4 of the Companies Act, 1956;

v. other special purpose vehicles not established by fund managers, including securitization trusts, regulated under a specific regulatory framework;

vi. funds managed by securitization company or reconstruction company which is registered with the Reserve Bank of India under Section 3 of the Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002; and

vii. any such pool of funds which is directly regulated by any other regulator in India;

The regulations provide for three categories of AIFs, as follows:

"Category I Alternative Investment Fund" which invests in start-up or early stage ventures or social ventures or SMEs or infrastructure or other sectors or areas which the government or regulators consider as socially or economically desirable and shall include venture capital funds, SME Funds, social venture funds, infrastructure funds and such other Alternative Investment Funds as may be specified;

"Category II Alternative Investment Fund" which does not fall in Category I and III and which does not undertake leverage or borrowing other than to meet day-today operational requirements and as permitted in these regulations;

"Category III Alternative Investment Fund" which employs diverse or complex trading strategies and may employ leverage including through investment in listed or unlisted derivatives.

Investment in all categories of Alternative Investment Funds shall be subject to the following conditions:-

a. the Alternative Investment Fund may raise funds from any investor whether Indian, foreign or non-resident Indians by way of issue of units;

b. each scheme of the Alternative Investment Fund shall have corpus of atleast twenty crore rupees;

c. the Alternative Investment Fund shall not accept from an investor, an investment of value less than one crore rupees:

   Provided that in case of investors who are employees or directors of the Alternative Investment Fund or employees or directors of the Manager, the minimum value of investment shall be twenty five lakh rupees.

d. the Manager or Sponsor shall have a continuing interest in the Alternative Investment Fund of not less than two and half percent of the corpus or five crore rupees, whichever is lower, in the form of investment in the Alternative Investment Fund and such interest shall not be through the waiver of management fees:

   Provided that for Category III Alternative Investment Fund, the continuing interest shall be not less than five percent of the corpus or ten crore rupees, whichever is lower.

e. the Manager or Sponsor shall disclose their investment in the Alternative Investment Fund to the investors of the Alternative Investment Fund;

f. no scheme of the Alternative Investment Fund shall have more than one thousand investors;

g. the fund shall not solicit or collect funds except by way of private placement.

Units of close ended Alternative Investment Fund may be listed on stock exchange subject to a minimum tradable lot of one crore rupees.

Listing of Alternative Investment Fund units shall be permitted only after final close of the fund or scheme (i.e. all committed subscriptions have been received in the fund).

Each category of alternative investment funds has its set of investment parameters specified.

An Alternative Investment Fund, by itself or through the Manager or Sponsor, shall lay down procedure for resolution of disputes between the investors, Alternative Investment Fund, Manager or Sponsor through arbitration or any such mechanism as mutually decided between the investors and the Alternative Investment Fund.

6.7. Investor Grievance Redressal Mechanism

Investors deal with different product and service providers when they conduct transactions related to their financial life. Regulations provide various mechanisms for the investors to address any grievance they may have with respect to their dealings. This may be to do with the accuracy and extent of information or advice related to a product or service, fees or expenses or penalty charged in any form or name, or a situation when a request for a service related to a financial product was delayed or even unattended. The first line of action for the investor is to approach the product or service provider concerned to get the grievance resolved. If it is not resolved to the investor's satisfaction, they can approach the regulator of the respective industry.

6.7.1 SCORES

SCORES is the online investor redressal mechanism set up by SEBI to deal with the complaints of investors related to all products and entities regulated by it. This includes complaints against companies who have made share issues in which the investor has invested in the primary or secondary markets, or against investment companies such as mutual funds, providers of portfolio management schemes, venture capital funds and others. Scores can also be used to register a complaint against intermediaries who facilitate investing in the product or securities, and servicing such investments such as brokers, merchant bankers, depositories and depository participants, registrars to the issue and transfer agents, distributors and financial advisors.

The SCORES' website at http://scores.gov.in/ provides the facility to register the complaint online. The complaint can also be sent physically to any of SEBI's offices. On receipt of a complaint SEBI examines its validity and then forwards it to the concerned entity for resolution. If the complaint is not resolved to the investor's satisfaction within 30 days they have the option to register a fresh complaint, escalate the matter to senior officers of SEBI or even consider legal action.

6.7.2 Banking Ombudsman

The Banking Ombudsman is a person appointed by the RBI to address the complaints of banking customers related to the services offered by banks. They also hear complaints related to credit cards issued by banks and Non-banking Finance Companies (NBFC).

The Banking Ombudsman is the redressal forum for a complaint against the services of a bank for receipt and payment of funds to and from the holder's account. Disputes related to interest charged or credited, penalty or fees charged, disputes related to ATM cards, debit cards and credit cards, issues of refusing a loan without valid reasons and others may also be referred to the ombudsman.

If the grievance has been directly addressed to the concerned bank but the individual has not received a satisfactory resolution within one month, then they can approach the Banking Ombudsman. The complaint can be filed online at http://www.bankingombudsman.rbi.org.in or in an email to the banking Ombudsman or physically at the office. The details, including name and address of the Ombudsman concerned, will be available with every bank branch.

If the complaint is valid the ombudsman will attempt a settlement with the concerned bank. If a settlement does not happen within one month, then the ombudsman will pass an award after giving both sides a chance to state their case.

6.7.3 IRDA Grievance Redressal Mechanisms

The Insurance Regulatory & Development Authority (IRDA) has set up the Integrated Grievance Management System (IGMS) to register complaints against any insurance company, its products or its distributors. Apart from the IGMS, IRDA also provides the facility to register the complaint through email to complaints@irda.gov.in, or on the toll free number provided on the IRDA website.

A complainant would first approach the grievance redressal mechanism of the insurance company. If the grievance is not addressed satisfactorily then it can be escalated to IRDA through the IGMS. The IGMS is the online system to register a complaint and track its status at http://www.igms.irda.gov.in/. Once a complaint is registered through the IGMS it is forwarded to the concerned insurer as well as to IRDA. If the complaint is made other than through the IGMS, the same will be forwarded to the insurer for resolution. IRDA's regulations require a complaint to be resolved within 15 days.

If the complainant is not satisfied with the resolution provided by the insurer, they can approach the Insurance Ombudsman for relief. The name and address of the ombudsman will be available with the servicing branch for the policy. The ombudsman will pass an award within one month after considering both sides of the case and giving an opportunity to the insurance company to settle the issue.

6.7.4 Investor Grievance Redressal by Stock Exchanges

The Nation-wide stock exchanges such as the National Stock Exchange (NSE) and the Bombay Stock Exchange (BSE) are required by SEBI to have an established mechanism to take up the complaints of the investors against the trading member or listed company.

What: You can register complaints against members of the stock exchange such as non-receipt of funds or securities, execution of trades without your consent, charging higher brokerage than what is permissible and other issues related to trading. You can also register complaints against the companies whose securities are listed on the stock exchange such as non-receipt of securities or refunds or interest related to offers made in the primary market, non-receipt of dividends, bonus or rights shares, interest and redemption amount on debentures, or complaints related to the dematerialisation or transfer of securities. The complaint can be registered online at http://www.nse-investorhelpline.com/EIS/ or physically at any of the Investor Service Centres the details of which are available at http://www.nseindia.com/invest/content/reg_complaint_offline.htm or in the case of BSE at http://www.bseindia.com/investors/invGrievances.aspx?expandable=2 . If the complaint is not resolved to the investor's satisfaction, the complaint gets referred to the Investor Grievance Resolution Panel (IGRP). The IGRP gives an opportunity to both parties to present their case and tries to broker a settlement. If that fails then the complainant has the option to seek arbitration in the matter.

6.7.5 Other Redressal Fora

A complaint relating to the non-repayment of deposits or payment of interest by an NBFC should be registered with the Company Law Board (CLB) or the Consumer forum. The complaint has to be in the prescribed form filed in duplicate and submitted at the office of the CLB for the area under which the company's registered office is situated.

If the complaint relates to non-repayment of deposits by companies or complaints relating to bonds and debentures issued by unlisted companies, then the complaint can be filed with the Ministry of Company Affairs at http://www.mca.gov.in/MCA21/index.html.

A subscriber to the National Pension Scheme (NPS) can raise a grievance with the Central Recordkeeping Agency (CRA) on their website https://cra-nsdl.com/CRA/. When the complaint is registered on the system, an alert goes to the entity against whom the complaint is made.

Sample Questions

1. **Which of the following need to compulsorily register as investment adviser with SEBI?**
   a. Mutual fund distributor
   b. Insurance adviser
   c. Lawyer
   d. None of the above

2. **Which of the following can deal with multiple insurance companies?**
   a. Insurance broker
   b. Insurance agent and broker
   c. Corporate insurance agent
   d. Bank assurance channel

3. **Read the following caselet and answer the questions that follow**

Mr. X is in the business of mutual fund distribution. He wants to become an insurance adviser.

a. Which of the following is applicable for Mr. X?
   i. Has to register as investment adviser if he sells either product
   ii. Can sell either mutual fund or insurance – not both
   iii. Can sell both mutual fund and insurance if he registers as investment adviser
   iv. There is no bar on Mr. X selling both products

b. Mr. X wants to pay back to clients, part of the moneys he collects from them?
   i. He is permitted to rebate only in case of mutual funds
   ii. He is permitted to rebate only in case of insurance
   iii. He is not permitted to rebate in either mutual funds or insurance
   iv. He is free to rebate in both mutual funds and insurance

c. Mr. X wants to focus on a business where there is no requirement of complying with a code of conduct. He should
   i. Do mutual funds, since code of conduct is not compulsory
   ii. Do insurance, since code of conduct is not compulsory
   iii. Can do either product, because both do not insist on a code of conduct
   iv. Re-consider, because both mutual funds and insurance require compliance with code of conduct

d. Mr. X tells a consultant that he will not register as investment adviser, because he does not want to appoint a compliance officer. What should the consultant tell Mr. X?

i. Consultant should explain to Mr. X, the benefits of appointing a compliance officer
ii. **Consultant should explain to Mr. X that appointment of compliance officer is compulsory only for non-individuals**
iii. Consultant should advise Mr. X not to worry, because SEBI is unlikely to verify
iv. Consultant should advise Mr. X that it is SEBI's job to give him a compliance officer

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CHAPTER 7: CASE STUDIES IN COMPREHENSIVE FINANCIAL ADVICE

LEARNING OBJECTIVES:

After studying this chapter, you should know about:

- How to assess the financial needs of a person nearing his retirement and render advise for financial planning
- How to assess the financial needs of a middle aged person and render advise for financial planning

The cases in comprehensive financial advice will address different topics covered in the Workbook. Examinees are advised to make themselves comfortable with the kind of MS Excel working illustrated in the cases that follow.

Case 7.1

Mr. Z, aged 52 years, is working in a leading company. His net savings are Rs 50,000 p.m. Based on salary growth and other factors, he expects this to rise by 20% p.a. till his retirement at age 60. This does not include monthly contributions of Rs 9,000 (Rs 4000 own contribution; Rs 5000 employer contribution) to various funds towards retirement corpus. These are expected to grow by 20% p.a. till retirement. The retirement corpus by the end of the year will be Rs 12 lakhs, entirely in debt, which will yield 8% p.a. on average. Besides his own residential house and the retirement corpus, his savings and investments will amount to Rs 50 lakhs by the end of the year, 30% of which will be in equity. He has a practice of investing, at the end of each year, his disposable savings into debt and equity in the ratio of 80:20. In the long run, he expects equity to yield 15% and debt to yield 8.5%. At the end of age 55, he expects an outflow of funds amounting to Rs 5 lakhs, which he hopes to meet out of annual savings.

He expects inflation of 10% and post-retirement investment return on his portfolio at 11%. His current expenses are Rs 40,000 per month.

Assume zero date as the end of age 52. Calculations are to be done on annual basis. Ignore taxation and interest income on savings and contributions during the year.

1) On retirement, how much will Mr. Z have in his retirement corpus?

a. Rs. 46,65,905
b. Rs. 50,65,910
c. Rs. 44,81,442
d. Rs. 48,65,917

2) At the end of Age 55, what percentage of Mr. Z's portfolio will be in debt (excluding retirement corpus)?

a. 69.49%
b. 68.29%
c. 66.99%
d. 71.79%

3) If he re-invests the entire retirement corpus in debt, what percentage of Mr. Z's portfolio will be in debt when he retires?

a. 72.76%
b. 70.51%
c. 74.21%
d. 76.29%

4) What is the corpus requirement to ensure that he is able to sustain the same standard of living for 15 years after retirement?

a. Rs. 14,496,632
b. Rs. 13,861,919
c. Rs. 15,239,389
d. Rs. 15,254,894

Calculations are shown in the following table:

Comprehensive Financial Plan of Mr. Z

		Age ---->	52	53	54	55	56	57	58	59	60
Savings											
Monthly (Rs.)			50000								
Annual			600000	720000	864000	1036800	1244160	1492992	1791590.4	2149908.48	2579890.176
Growth in savings				20%	20%	20%	20%	20%	20%	20%	20%
Outflow at age 55						500000					
Net savings available to invest				720000	864000	536800	1244160	1492992	1791590.4	2149908.48	2579890.176
Invested in											
Debt	A	80%		576000	691200	429440	995328	1194393.6	1433272.32	1719926.784	2063912.141
Equity	B	20%		144000	172800	107360	248832	298598.4	358318.08	429981.696	515978.0352
Investment Portfolio											
Lumpsum			5000000								
Debt											
Opening Balance		70% of 5000000		3500000	4373500	5436447.5	6327985.54	7861192.308	9723787.254	11983581.49	14722112.7
Interest		8.5%		297500	371747.5	462098.038	537878.771	668201.3462	826521.9166	1018604.427	1251379.58
Additions (A)				576000	691200	429440	995328	1194393.6	1433272.32	1719926.784	2063912.141
Closing Balance	C			4373500	5436447.5	6327985.54	7861192.31	9723787.254	11983581.49	14722112.7	18037404.42
Equity											
Opening Balance		30% of 5000000		1500000	1869000	2322150	2777832.5	3443339.375	4258438.681	5255522.563	6473832.644
Returns		15.0%		225000	280350	348322.5	416674.875	516500.9063	638765.8022	788328.3845	971074.8966
Additions (B)				144000	172800	107360	248832	298598.4	358318.08	429981.696	515978.0352
Closing Balance	D			1869000	2322150	2777832.5	3443339.38	4258438.681	5255522.563	6473832.644	7960885.576
Allocation to Debt		C/(C+D)		70.06%	70.07%	69.49%	69.54%	69.54%	69.51%	69.46%	69.38%
Allocation to Equity		D/(C+D)		29.94%	29.93%	30.51%	30.46%	30.46%	30.49%	30.54%	30.62%
Retirement Corpus											
Opening Balance				1200000	1425600	1695168	2017405.44	2402747	2863705	3415288	4075494
Interest		8%		96000	114048	135613	161392	192220	229096	273223	326040
Additions		20%	108000	129600	155520	186624	223949	268739	322486	386984	464380
Closing Balance	E			1425600	1695168	2017405.44	2402746.68	2863705	3415288	4075494	4865914
Asset Allocation to Debt at Retirement		(C+E)/(C+D+E)									74.21%
Asset Allocation to Equity at Retirement		D/(C+D+E)									25.79%

Calculation of Retirement Corpus Required

Living expenses at age 52	40000 x 12	480000
Years to retirement @60		8
Inflation		10%
Living expense on retirement	FV(10%,8,,-480000)	1028922.629
Number of years in retirement to provide for		15
Expected investment return		11%
Inflation adjusted returns	((1+11%)/(1+10%))-1	0.91%
Retirement corpus required	PV(0.91%,15,-1028922.629,,1)	**14496632**

Case 7.2

Mr. Y, aged 40, has the following goals ahead of him. (1) Son's post-graduate education: Due in Year 5. Current cost Rs 15,00,000 p.a. to be incurred at the end of each year for 2 years. Likely Inflation 15% p.a. (2) Daughter's marriage: Scheduled in end of Year 7. Current cost Rs 1,00,00,000. Inflation is assumed to be at 10% p.a. Mr. Y has provided a corpus of Rs 2,00,00,000 towards these two needs. The corpus is invested in a mix of debt and equity yielding 8% p.a. Ignore taxation.

1) How much money will need to be set apart from the corpus at the end of Year 5, to finance the son's post-graduate education? Assume the amount set apart will earn 6% interest.

a. Rs. 59,34,184
b. Rs. 62,90,235
c. Rs. 64,12,209
d. Rs. 60,35,259

2) What is the likely outflow on account of daughter's marriage in the year it is planned?

a. Rs. 1,94,87,171
b. Rs. 1,77,15,610
c. Rs. 2,14,35,888
d. Rs. 2,05,10,865

3) How much will be left in the corpus after both goals are fulfilled (assume that he does not set apart money in the 6% corpus mentioned in Q1)?

a. Rs. 81,24,932
b. Rs. 69,65,820
c. Rs. 75,23,085
d. Rs. 66,42,292

4) How would you describe the investment policy Mr. Y is using for the corpus?

a. A little conservative
b. A little aggressive
c. Very aggressive
d. Very conservative

Calculations as shown in the following table:

Goal 1: Fund the son's two-year post-graduation education due in 5 years

Current cost of medical education for son	1500000 per annum	
Period after which has to be met	Years 5 and 6	
Expected inflation	15%	
Future Cost of Education		
For year 1 (After 5 years)	3017035.781	**FV(15%,5,,-1500000)**
For year 2 (After 6 years)	3469591.148	**FV(15%,6,,-1500000)**
Funding the Goal		
Funds required after 5 years to meet the cost of education of year 1.....**(a)**	3017035.78	
Funds required after 5 years to meet the cost of education of year 2.....**(b)**	3273199.20	**PV(6%,1,,-3469591)**
	(Rs.3273199 invested for one year @ 6% grows to the amount required for year 2, Rs.3469591)	
Total amount of money required in year 5 to fund the cost of education for year 1, year 2...**(a)+(b)**	**6290235**	

Goal 2: Fund the daughter's marriage at the end of 7 years

Current cost of marriage	Rs.100,00,000	
Number of years after which the expense has to be met	7 years	
Expected inflation	10%	
Future Cost of the Goal	**19487171**	**FV(10%,7,,-10000000)**

Balance in corpus after funding goals

	Age------->	41	42	43	44	45	46	47
Opening Balance		20000000	21600000	23328000	25194240	27209779.2	26369525.8	25009496.67
Returns	8%	1600000	1728000	1866240	2015539.2	2176782.34	2109562.06	2000759.733
Outflow						-3017036	-3469591.15	-19487171
Closing Balance		21600000	23328000	25194240	27209779.2	26369525.8	25009496.7	**7523085.4**

Indicative Reading List

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- Bogle John C, "Common Sense on Mutual Funds", John Wiley & Sons
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- Income Tax Ready Reckoner (Latest)
- Jacobs Bruce, "All about Mutual Funds", Probus Publishing
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- Sadhak H, "Mutual Funds in India", Response Books / Sage Publications
- SEBI, Investor Grievances - Rights & Remedies
- Scott David L, “How to Manage Your Investment Risks and Returns”, Vision Books
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- Sundar Sankaran, “Wealth Engine: Indian Financial Planning & Wealth Management Handbook”, Vision Books (2012)

Indicative Browsing List

- AMFI (www.amfiindia.com)
- BSE (www.bseindia.com)
- Care Ratings (www.careratings.com)
- Credence Analytics (www.credenceanalytics.com)
- CRISIL (www.crisil.com)
- ICRA (www.icra.in)
- IRDA (www.irda.gov.in)
- Lipper (www.lipperweb.com)
- MCX-SX (www.mcx-sx.com)
- Morning Star (www.morningstar.com)
- Mutual Fund India (www.mutualfundindia.com)
- NSE (www.nseindia.com)
- PFRDA (www.pfrda.org.in)
- RBI (www.rbi.org.in)
- SEBI (www.sebi.gov.in) - Mutual Funds Section
- Value Research (www.valueresearchonline.com)

Note: The above mentioned Reading and Browsing list is only indicative and is provided only as a guide to readers.

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