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Workbook for

NISM-Series-XV: Research Analyst 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) Certification Examination for Research Analyst.

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Foreword

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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. This book covers all important topics required to undertake research on companies. These include the basics of Indian Securities Markets, various terminologies used in the equity and debt markets; top down and bottom up approach to fundamental research; basic principles for micro and macro-economic analysis and key industry drivers; qualitative and quantitative dimensions with respect to Company Analysis; Fundamentals of Risk and Return; Valuation Principles and the philosophy of various Corporate Actions. The book also covers the essential aspects of writing a good research report. It will be immensely useful to all those who want to learn about the various aspects of equity research.

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-XV: Research Analyst Certification Examination consisting of industry experts and SEBI officials. NISM gratefully acknowledges the contribution of the committee members.

About the Author

This workbook has been developed by the Certification Team of National Institute of Securities Markets in co-ordination with Mr. Manish Bansal of Value Ideas Investment Services Pvt. Ltd. This workbook has been reviewed by Ms. Sunita Abraham, Consultant.

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) Certification Examination for Research Analyst. NISM-Series-XV: Research Analyst Certification Examination seeks to create a common minimum knowledge benchmark for all associated persons registered as Research Analyst under SEBI (Research Analyst) Regulations, 2014, individuals employed as research analyst and partners of a Research Analyst.

The book covers all important topics required to perform research on companies. These include the basics of Indian Securities Markets, various terminologies used in the equity and debt markets; top down and bottom up approach to fundamental research; basic principles for micro and macro-economic analysis and key industry drivers; qualitative and quantitative dimensions with respect to Company Analysis; Fundamentals of Risk and Return; Valuation Principles and the philosophy of various Corporate Actions. The book also covers the essential aspects of writing a good research report.

About the Certification Examination for Research Analyst

The examination seeks to create a common minimum knowledge benchmark for all associated persons registered as research analyst under SEBI (Research Analyst) Regulations, 2014, individuals employed as research analyst and partners of a research analyst, engaged in preparation and/or publication of research report or research analysis.

An associated person shall be required to pass the NISM-Series-XV: Research Analyst Certification Examination to fulfill the requirements specified under Regulation 7(2) of the SEBI (Research Analysts) Regulations, 2014.

The certification aims to enhance the quality of services provided by research analyst in the financial services industry.

Examination Objectives

On successful completion of the examination, the candidate should:

- Know the basics of Indian Securities Markets and different terminologies used in equity and debt markets
- Learn about the top down and bottom up approach to fundamental research
- Know the basic principles for micro and macro-economic analysis, the sources of different information for analysis and the various macroeconomic variables affecting the analysis.
- Know the key industry drivers and sources of information for industry analysis.
- Understand about the Qualitative and Quantitative dimensions with regards to Company Analysis.
- Learn about the Fundamentals of Risk and Return, Valuation Principles and the philosophy of various Corporate Actions.
- Understand the qualities of a good research report.

Assessment Structure

The examination consists of 100 questions of 1 mark each and should be completed in 2 hours. The passing score on the examination is 60%. There shall be negative marking of 25% of the marks assigned to a question.

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: INTRODUCTION TO RESEARCH ANALYST PROFESSION

LEARNING OBJECTIVES:

After studying this chapter, you should know about:

- Role of a research analyst
- Functions of a research analyst
- Principles to be followed by research analysts

1.1 Primary Role of a Research Analyst

Imagine you've decided to buy a new phone. What would be your **process of selection**? For the price range decided, you would short list a set of brands, compare various technical specifications and depending upon **what factors are important to you** - whether it's the battery-life or the megapixels of camera, you **take the decision**.

This process is very similar to the kind of work Research Analysts (RAs) do, to help their clients take investment decisions. There is *Research* - collection of information from various sources and then *Analysis* - processing of data to take decisions.

Data and information is imperative to the function of the research analyst. RAs need information pertinent to the investment being evaluated. This would include information about the macro and micro economic factors, industry-specific information and company-specific information. Economic information may be collected from government statistics and data provided by the central bank i.e. the Reserve Bank of India. Data on global factors may be collected from International agencies such as the International Monetary Fund (IMF), Asian Development Bank (ADB) and other Global Development Financial Institutions. Industry-specific journals and publications may be used to collect information on industries/sectors. Company-specific information may be collected from various sources including the financial statements filed by the companies as part of regulatory compliance requirements, officials of the company authorized to provide it and other sources such as plant visits, surveys and interviews.

Analysis and decision making process is a combination of understanding qualitative factors that affect operational performance, such as efficiency of operations, competitiveness, business plans and work ethics of the management among others and quantitative factors such as revenues, costs, profitability and risks to these financials. Therefore, RAs spend lot of time interacting with companies and others, accumulating data, analysing it and arriving at a buy, hold or sell call.

Research Analysts are defined by the nature of analysis they do, the coverage, and use of the recommendations they provide. Let us understand some of them:

Sell-side Analysts - They typically publish research reports on the securities of companies or industries with specific recommendation to buy, hold, or sell the subject security. These recommendations include the analyst's expectations of the earnings of the company and future price performance of the security ("price target"). These analysts work for firms that provide investment banking, broking, advisory services for clients.

Buy-side Analysts - They generally work for money managers like mutual funds, hedge funds, pension funds, or portfolio managers that purchase and sell securities for their own investment accounts or on behalf of their clients. These analysts generate investment recommendations for their internal consumption viz. use by the fund managers within organization. Research reports of these analysts are generally circulated among the top management/investment managers of the employer firms as these reports contain recommendations about which securities to buy, hold or sell.

Independent Analysts - They work for research originators or boutique firms separate from full-service investment firms and sell their research to others on a subscription basis. Their clients could be investors, institutions, investment bankers, regulators, stock exchanges, fund managers etc. They also provide customized research reports on the businesses on specific requests. The purpose of these reports could vary from investment activity to understanding competition to mergers and acquisition etc.

Apart from these three main categories, entities such as newspapers, media and consolidators of information also provide research reports.

In nutshell, role of a research analysts is that of a selector - to do a comprehensive study of companies, evaluate their past performance, analyse how a company is expected to perform in the future and make recommendations based on this analysis.

1.2 Primary Responsibilities of a Research Analyst

As stated before, Research Analysts' primary role is to understand and evaluate the growth of industries and companies. Let us briefly look into the aspects which the Research Analysts explore while evaluating industries, companies and/or economies.

Understanding economy:

British economist John Maynard Keynes (1883–1946) believed that governments could change economic performance of its industries by adjusting tax rates and government spending. Therefore, as growth depends, to a great extent, on the economic environment, it becomes important for analysts to understand the economy. For this, the following are their focus areas:

- Changes in various macro-economic factors like - National income, Inflation, Interest rate and Unemployment rate
- Fiscal and Monetary Policies and their impact on the economy
- Flows from Foreign Direct Investment (FDI) and Foreign Portfolio Investors (FPIs)
- Savings and investment patterns
- Global factors that impact the GDP growth based on export and import transactions

We shall know more about economic analysis in Chapter 5.

Understanding industry:

Different industries face different challenges and opportunities. Their growth drivers could be significantly different. Accordingly, Research Analysts need to understand thoroughly the regulatory environment prevalent in the industry, business models, competition, operating factors, sensitivity of demand to price changes, consumers' behaviour etc.

We shall explore the methods for Industry analysis using various tools and techniques in Chapter 6.

Understanding Companies:

Dravid and Sehwag are both great, but are two very different players. Their statistics (in terms of strike rate and so on) and their style (defensive and aggressive) is different. If one asks - who would perform better? Then a deeper analysis of the pitch, game type and the opposition team's bowling strengths may help us answer the question, although only with probability and not with certainty.

Just as in the case of players' statistics and style, companies in the same industry may vary significantly in their approach towards business. Based on their styles, product configuration, business model, customers segment, their financials could also vary dramatically. Accordingly, companies are also studied by analysts in two dimensions - Qualitatively and Quantitatively.

Qualitative understanding is more about understanding why a particular business is better when compared to its peers, what are the strengths and weakness of the business model, how qualified and capable the management is and so on. Quantitative understanding would be more mathematical in nature. In this, analysts try to understand the balance sheets and profit and loss statements of last few years, cash flows, asset and liabilities and so on.

We shall look at both the approaches (Qualitative and Quantitative) of company analysis in great detail in Chapters 7 and 8 respectively.

1.3 Basic Principles of Interaction with Companies / Clients

Though the power of internet gives an analyst the ability to acquire a lot of information, it cannot substitute direct interaction with companies and clients. Personal communication with management helps them to get a better insight in to the vision of the company and its strategy to acquire the desired goals.

However, it may also happen that management mislead the analysts by deliberately exaggerating positives about business (painting rosy pictures) to encourage them to write positive stories to influence the market prices positively. Also, sometimes, managements speak negative about their business so as to discourage people from buying their stocks. Therefore, it is always advisable for analysts to cross verify the claims of the management prior to their recommendations.

This communication with management, like any other, requires analysts to have clarity of thoughts and good listening ability but there are a few additional principles that analysts must keep in mind while talking to the management of a company. The following are a few:

Pre-meeting Research - While the management is generally open to interview with Research Analysts, they must bear in mind that these opportunities do not come very frequently and therefore must be made full use of whenever they come. Before going to meet a company's management, they must thoroughly learn about their products, industry and competitors' steps. Analysts must be familiar with the financial information of the company, also read previous year's annual reports to understand the direction of the company and whether the company has been able to achieve the goals it had intended to.

Independence and Neutrality of view - During the research, analysts must have an unbiased opinion and should always hold their independence. Their analysis should be based on factual information and not led by personal inclinations. Also, they must make it clear with the management to not reveal any information which is not available in the public domain.

Network - Analysts may use their network to acquire more contacts relevant to the research, who would be able to provide meaningful insights into the company's performance and plans. The person who is responsible for the important activities and understands the heartbeat of the company would be the most relevant contact and this person may not necessarily be from top management. Competitors and other stakeholders of the business such as suppliers, distributors, retailers and customers can also provide meaningful inputs to analysts in the research process.

Clarity of questions - As analysts start analysing a company, there would be certain aspects on which they might need more clarity. Time with management would be effectively used if analysts have clear and specific set of questions in mind. It is advisable to go with a questionnaire to have a better understanding of the company's operations and future progress.

Once analysts are done with research and research report is prepared, they need to communicate their findings to the clients. There are certain guidelines that an analyst could follow in their communication with clients.

- They must be realistic in suggesting companies to their clients. Suggestions should be based on facts and figures and not contain an optimistic/pessimistic/biased view on the subject company.
- Communication, done through written research reports, should be simple, clear and concise.
- If there is any conflict of interest (e.g. RA holds shares of the subject company), such information should be disclosed beforehand.
- Assumptions, if any, must be clearly stated in the research reports.
- Abbreviations/Jargons should either be avoided or explained clearly in simple words.

The role of RAs is to collect data/information from different reliable sources, interpret the data/information and convert it into recommendations that their clients can use. While doing so, it is expected that RAs would perform their role with utmost sincerity, honesty and ethics without any bias, following all the rules and regulations as specified by SEBI both in words and spirit. For this, it is also recommended to make use of technology like recording devices while interviewing management and communicating with clients, only after taking their due consent for recording.

1.4 Important Qualities of a Research Analyst

The job of research analysts requires quantitative and qualitative skills. An analyst needs to have a high degree of comfort in dealing with numbers to be able to analyse various financial

factors, identify trends and see the inter-relationship between different factors. At the same time, he needs to be methodical, have an enquiring mind and be discerning to know where to find relevant information. Ability to understand business models and competitive dynamics in a business is another important quality an analyst must possess. Using these skills, a research analyst comes to the conclusion whether he would be in favour of or against investing in a particular industry or company.

Qualities that are desired in a good research analyst are:

- Good with numbers
- Good Excel/spreadsheet and other data analytical tools
- Clarity in financial concepts
- Ability to read and comprehend financial statements and reports
- Ability to ask pertinent questions
- Attention to details
- Communication Skills – Written and Verbal

(Sample research report)

Link:

- http://www.bseindia.com/download/Research_Report/Report/536492/2013-14/Ace%20Tours%20Worldwide_%20Ltd.pdf
- http://www.nseindia.com/corporate/eq_3IINFOTECH_upd12_10Dec2013.pdf

Sample Questions

1. **What is the role of Research Analyst?**
   a. RAs are only involved in the analysis of data
   b. RAs are only involved in collection of the data
   c. **RAs help their clients take informed decisions**
   d. RAs help in financial planning of their client

2. **Analysis and Decision making, the two imperative parameters involved in are affected by which of the following factors?**
   a. Management Ethics
   b. Revenues and Costs
   c. Efficiency of operations
   d. **All of the above**

3. **Sell side Analyst generally work for money managers like mutual funds, hedge funds, portfolio managers who purchase and sell securities for their own investment accounts or on behalf of their clients. State whether True or False.**
   a. True
   b. **False**

4. **Which of these Qualities are desired in a good research analyst?**
   a. Knack for numbers and interpretation
   b. Clarity in financial concepts
   c. Ability to read and understand financial statement
   d. **All of the above**

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CHAPTER 2: INTRODUCTION TO SECURITIES MARKET

LEARNING OBJECTIVES:

After studying this chapter, you should know about:

- Meaning of securities and the functions of securities market
- Various kinds of products in securities market
- Functions of the securities market participants
- Concept of Dematerialization and Rematerialisation

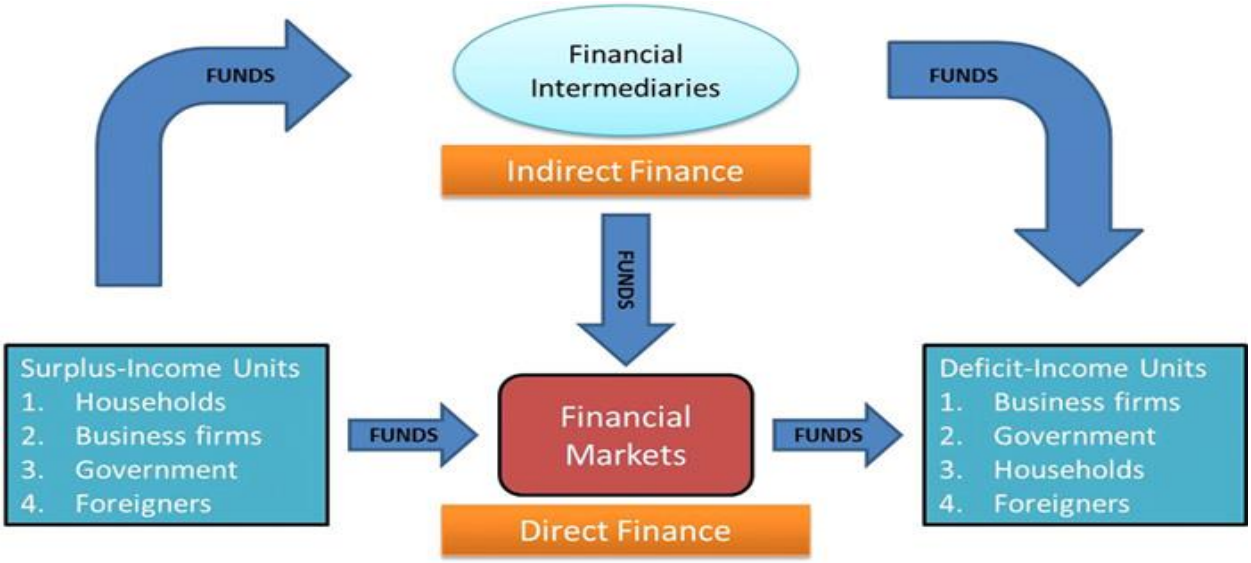
2.1 Introduction to Securities and Securities Market

Securities are financial instruments issued to raise funds. The primary function of the securities market is to enable the flow of capital from those that have it to those that need it. Securities market helps in transfer of resources from those with idle or surplus resources to others who have a productive need for them. To state formally, securities market provides channels for conversion of savings into investments.

A security represents the terms of exchange of money between two parties. Securities are issued by companies, financial institutions or the government. They are purchased by investors who have money to invest. Security ownership allows investors to convert their savings into financial assets which provide a return. Security issuance allows borrowers to raise money at a cost. Through Securities Market, a broader universe of savers with surplus to invest is available to the issuers of securities and a universe of wider options is available to savers to invest their money in. Thus, the objectives of the issuers and the investors are complementary, and the securities market provides a platform to mutually satisfy their goals. Securities are useful because owners can transfer their interest to others without the issuers being impacted – by providing liquidity, securities allow issuers to raise capital for the long term without locking in investors.

Broadly stating, Financial Market consists of:

- Investors (buyers of securities)
- Borrowers/Seekers of funds (sellers of securities)
- Intermediaries (providing the infrastructure to facilitate transfer of funds and securities)
- Regulatory bodies (responsible for orderly development of the market)



The term "securities" has been defined in the Section 2(h) of Securities Contracts (Regulation) Act, 1956 (SCRA).

The term 'Securities' include:

1. Shares, scrips, stocks, bonds, debentures, debenture stock or other marketable securities of a like nature in or of any incorporated company or other body corporate
2. Derivative
3. Units or any other instrument issued by any collective investment scheme to the investors in such schemes units
4. Security receipt as defined in clause (zg) of Section 2 of the Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002
5. Units or any other such instrument issued to the investors under any mutual fund scheme
6. Any certificate or instrument (by whatever name called), issued to an investor by an issuer being a special purpose distinct entity which possesses any debt or receivable, including mortgage debt, assigned to such entity and acknowledging beneficial interest of such investor in such debt or receivable, including mortgage debt as the case may be.
7. Government securities
8. Such other securities as may be declared by the Central Government to be securities and
9. Rights or interest in securities

The investors in the Indian securities market have a wide choice of financial products to choose from depending upon their risk appetite and return expectations. Broadly, the financial products can be categorized as equity, debt and derivative products. We shall learn more about these securities in detail in the next section.

2.2 Product Definitions / Terminology

There are many financial instruments issued in the market, each with distinct risk and return characteristics that define its suitability for an investor. In this section, we shall explore the major instruments available in the Indian Securities Market.

2.2.1 Equity Shares

Issued by: Companies

Investors: Institutional and Individual (Retail and HNI)

Medium: Direct issuance by companies and Stock Exchange

Regulator: SEBI, Regulators under the Companies Act

Equity shares represent the form of fractional ownership in a business venture. Equity shareholders collectively own the company. They bear the risk and enjoy the rewards of ownership.

2.2.2 Debentures/Bonds/Notes

Issued by: Companies, Government, Special Purpose Vehicles (SPVs)

Investors: Institutional and Individual

Medium: Direct issuance by issuers and Stock Exchange

Regulator: RBI, SEBI, Regulators under the Companies Act

Debentures/Bonds/Notes are instruments for raising long term debt. Debentures are either unsecured or secured (backed by collateral support) in nature. There are variety of debentures/bonds such as fully convertible, non-convertible and partly convertible debentures.

- Fully convertible debentures are fully convertible into ordinary shares of the issuing company. The terms of conversion are specified at the time of issue itself.
- Partly convertible debentures (PCDs) are partly convertible into ordinary shares of the issuing company under specified terms and conditions as specified at the time of issue itself. The non-convertible part of these debentures is redeemed as happens in any other vanilla debenture.

- Non-Convertible Debentures (NCDs) are pure debt instruments without a feature of conversion. The NCDs are repayable/redeemable on maturity.

Thus, debentures can be pure debt or quasi- equity, as the case may be (We would discuss about these types in section 2.2.7 in further detail).

Further, short-term debt instruments are used to raise debt for periods not exceeding one year. These instruments include Treasury Bills issued by the government, Commercial Papers issued by the companies and Certificate of Deposit issued by the banks.

2.2.3 Warrants and Convertible Warrants

Issued by: Companies

Investors: Institutional and Individual

Medium: Direct issuance by companies and Stock Exchange

Regulator: SEBI

Warrants are options that entitle an investor to buy equity shares of the issuer company after a specified time period at a given price. Only a few companies in Indian Securities Market have issued warrants till now.

2.2.4 Indices

A market index tracks the market movement by using the prices of a small number of shares chosen as a representative sample. Most leading indices are weighted by market capitalisation to take into account the fact that more the number of shares issued, greater the number of portfolios in which they may be held. Stocks included in an index are also quite liquid, making it possible for investors to replicate the index at a low cost. Narrow indices are usually made up of the most actively traded equity shares in that exchange. Other indices to track sectors or market cap categories are also in use.

The most widely tracked indices in India are the S&P BSE Sensitive Index (S&P BSE Sensex), the MSEI Flagship Index (SX40) and the Nifty 50. The S&P Sensex has been computed as the market cap weighted index of 30 chosen stocks on the BSE. The SX40 is composed of 40 most representative stocks listed on Metropolitan Stock Exchange of India Ltd (MSEIL) and the Nifty 50 is composed of 50 most representative stocks listed on the National Stock Exchange. The shares included in these indices are chosen on the basis of factors such as liquidity, availability of floating stock and size of market capitalization.

The composition of stocks in the index is reviewed and modified from time to time to keep the index representative of the underlying market.

Some of the other common indices in India are listed below:

- Nifty Next 50
- Nifty 100
- Nifty 500
- S&P BSE-100
- S&P BSE- 500
- S&P BSE-Midcap
- S&P BSE-Small Cap

There are also sector indices for banking, information technology, pharma, fast-moving consumer goods and such other sectors, created by the exchanges to enable tracking specific sectors.

The major uses of indices are:

- The index can give a comparison of returns on investments in stock markets as opposed to asset classes such as gold or debt.
- For the comparison of performance with an equity fund, a stock market index can be the Benchmark.
- The performance of the economy or any sector of the economy is indicated by the index.
- Real time market sentiments are indicated by indices.
- Indices act as an underlying for Index Funds, Index Futures and Options.

2.2.5: Mutual Fund Units

Issued by: Mutual Funds

Investors: Institutional and Individual

Medium: Direct issuance by mutual funds and Stock Exchange

Regulator: SEBI, RBI

Mutual Funds (MFs) are investment vehicles that pool together the money contributed by investors which the fund invests in a portfolio of securities that reflect the common investment objectives of the investors. Each investor's share is represented by the units issued by the fund.

The value of the units, called the Net Asset Value (NAV), changes continuously to reflect changes in the value of the portfolio held by the fund.

MF schemes can be classified as open-ended or close-ended. An open-ended scheme offers the investors an option to buy units from the fund at any time and sell the units back to the fund at any time. These schemes do not have any fixed maturity period. The units can be bought and sold anytime at the NAV linked prices.

The unit capital of closed-ended funds is fixed and they sell a specific number of units. Units of closed-ended funds can be bought or sold in the Stock Market where they are mandatorily listed.

2.2.6 Exchange Traded Funds (ETFs)

Issued by: Mutual Funds

Investors: Institutional and Individual

Medium: Direct issuance by mutual funds and Stock Exchange

Regulator: SEBI, RBI

Exchange Traded Fund (ETF) is an investment vehicle that invests funds pooled by investors to track an index, a commodity or a basket of assets. It is similar to an index fund in the sense that its portfolio reflects the index it tracks. But, unlike an index fund, the units of the ETF are listed and traded in demat form on a stock exchange and their price changes continuously to reflect changes in the index or commodity prices.

ETFs provide the diversification benefits of an index fund as well as the facility to sell or buy at real-time prices, even one unit of the fund. Since an ETF is a passively managed portfolio, its expense ratios are typically lower than that of a mutual fund scheme.

2.2.7 Hybrids/Structured Products

2.2.7.1 Preference Shares:

Preference shares, as their name indicates, are a special kind of equity shares which have preference over common/ordinary equity shares at the time of dividend and at the time of repayment of capital in the event of winding up of the company. They have some features of equity and some features of debt instruments.

Preference shares resemble equity as preference shareholders are called shareholders of the company (not creditors), payment to them is termed as dividend and the same is paid from the Profit after Tax and dividend payment is not an obligation. However, unlike common equity shares, preference shares do not carry voting rights or a right over the residual assets of the company, in case of winding up.

Preference shares resemble debt instruments because they offer pre-determined rate of dividend and this dividend is payable before any dividend is paid on common equity. Further, in case of winding up of the company, preference shareholders get paid before common equity holders. In other words, these shareholders have preference over the common equity holders at the time of distribution of both earnings and assets.

There are variety of preference shares – cumulative (unpaid dividend is carried forward), non-cumulative (unpaid dividend lapses), convertible partly or fully etc.

2.2.7.2 Convertible Debentures & Bonds:

Convertible debentures are debt instruments that can be converted into equity shares of the company at a future date. This security also has features of both debt and equity. It pays periodic coupon/interest just like any other debt instrument till conversion. And, at a pre-defined time, this debt instrument may get converted into equity shares. These debentures may be of different kinds:

- *Fully convertible debentures (FCD)* - where the entire face value of the debenture is converted into equity shares
- *Partly convertible debentures (PCD)* - where a portion of the debenture is converted into equity. The non-convertible portion continues to remain as debentures, earns interest income and gets repaid on redemption
- *Optionally convertible debentures (OCDs)* - OCDs are convertible into equity shares at the discretion of the debenture holders, who may choose to convert them into equity, or continue to hold the instrument as debt depending on their desire and the terms of conversion.

The issuer specifies the details of the conversion at the time of making the issue itself. These will generally include:

- Date on which or before which the conversion may be made
- Ratio of conversion i.e. the number of shares that the investor will be eligible to get for each debenture

- Price at which the shares will be allotted to the investor on conversion. Usually, this is at a discount to the market price
- Proportion of the debenture that will be converted into equity shares (in case of partially convertible debentures)

The advantage to the issuer of convertible debenture lies in the fact that convertible debentures usually have a lower coupon rate than pure debt instruments. This is because the yield to the investor in such debenture is not from the coupon alone but also the possibility of capital appreciation in the investment once the debentures are converted into equity shares. Moreover, the issuer does not have to repay the debt on maturity since shares are issued in lieu of repayment. The disadvantage to this is that stakes of the existing shareholders get diluted when fresh shares are issued on conversion. As more shareholders come in, the proportionate holding of existing shareholders fall.

The investors in a convertible debenture have the advantage of equity and debt features. They earn coupon income in the initial stage, usually when the company's project is in its nascent stage. And, once the debenture is converted into shares, they may benefit from the appreciation in the value of the shares.

2.2.7.3 Indian Depository Receipts (IDRs), Global Depository Receipts (GDRs) and American Depository Receipts (ADRs):

Depository receipts (DRs) are financial instruments that represent shares of a local company but are listed and traded on a stock exchange outside the country of its origin/registration. DRs are issued in foreign currency.

To issue a DRs, a specific quantity of underlying equity shares of the company is lodged with a custodian bank, which authorizes the issue of depository receipts against these shares. Each DR represents certain number of underlying shares of the issuer company. Various kinds of DRs are:

- *American Depository Receipts (ADRs)* - if DRs are issued only in U.S. and listed on a stock exchange in the U.S. such as the New York stock exchange.
- *Global Depository Receipts (GDRs)* - if DRs are issued in several countries together and listed on a stock exchange outside the U.S. say on London Stock Exchange.
- *Indian Depository Receipts (IDRs)* – if DRs are issued in India and listed on an Indian Stock Exchange with foreign stocks as underlying shares.

The shares of a company that form the basis of an ADR/GDR/IDR issue may be existing shares i.e. shares that have already been issued by the company. These shareholders now offer their

shares at an agreed price for conversion into DRs. Such a DR issue is called a sponsored issue. Alternatively, the company can issue fresh shares which form the underlying for the DR issue.

The company, whose shares are traded as DRs, gets a wider investor base from the international markets. Investors in international markets get to invest in shares of the company that they may otherwise have been unable to do because of several restrictions or administrative issues. Investors get to invest in international stocks through domestic exchanges with their existing brokers and local currency. Holding DRs give investors the right to dividends and capital appreciation from the underlying shares, but no voting rights. However, issue of voting rights to DR holders is under consideration of SEBI at present.

The steps in issuing DRs are the following.

- The company has to comply with the listing requirements of the stock exchange where they propose to get the DRs listed.
- The company appoints a depository bank which holds the stock and issue DRs against it.
- If it is a sponsored issue, the stocks from existing shareholders are acquired and delivered to the local custodian of the depository bank. Else, the company issues fresh shares against which the DRs are issued.
- Each DR represents certain number of underlying shares of the company.

DRs may feature two-way fungibility, subject to regulatory provisions of the countries involved. This means that shares can be bought in the local market and converted into DRs to be traded in the foreign market. Similarly, DRs can be bought and converted into the underlying shares which are traded on the domestic stock exchange.

Indian companies are permitted to raise foreign currency resources in the form of issue of ordinary equity shares through depository receipts. Foreign companies are also allowed to raise equity capital from India through IDRs.

SEBI has laid down the guidelines to be followed by companies for IDRs. These include the limit on the money raised by a company in India, one year lock-in on the conversion of IDRs into shares, the availability of IDRs to only resident Indian investors, etc.

2.2.7.4 Foreign Currency Convertible Bonds (FCCBs):

FCCBs or Foreign Currency Convertible Bonds are foreign currency (usually dollar) denominated convertible debt papers issued by companies in international markets. These instruments are to be understood the way convertibles are with only difference that they are generally

optionally convertible and issued offshore in different denomination under guidelines as defined by Reserve Bank of India (RBI) from time to time.

The payment of interest and repayment of principal (if happens) on these bonds is in foreign currency. However, once conversion of instrument happens in equity, dividend is paid in Indian Rupees with conversion obligation (currency risk) lying with the investors.

FCCBs are regulated by RBI notifications under the Foreign Exchange Management Act (FEMA). The Issue of Foreign Currency Convertible Bonds and Ordinary Shares (Through Depository Receipt Mechanism), 1993 lays down the guidelines for such issues.

2.2.7.5 Equity Linked Debentures (ELDs):

Equity Linked Debentures (ELDs) are floating rate debt instruments whose interest is based on the returns of the underlying equity asset such as Nifty 50, S&P Sensex, individual stocks or any customized basket of individual stocks. The issuer of bond invests a pre-determined part of the principal amount collected in fixed income securities like bonds, which provide principal protection while the balance is used to buy options which provide the exposure to returns of equity. Thus, these instruments are generally structured in a way to give 100% capital protection with a provision for equity participation to the investors. Capital Protection should not be read as non-existence of credit risk (risk of default by issuer). These instruments still carry credit risk and accordingly rated by credit rating agencies.

2.2.7.6 Commodity Linked Debentures (CLDs):

Just like ELDs, CLDs are floating rate debt instruments whose interest is based on the returns of the underlying commodity asset. While the returns can be linked to any commodity, most of these papers globally are linked to precious metals – Gold and Silver. Like ELDs, 100% capital protection with a provision for participation in commodity markets are the advantages of CLDs.

2.2.7.7 Mortgage Backed Securities (MBS) and Asset Backed Securities (ABS):

MBS and ABS are debt instruments issued by institutions against the receivables and cash flows from financial assets such as home loans (MBS), auto loans, rent receivable, credit card receivables and others. The cash flows accruing from these assets are used to meet the interest and principal repayment obligations on the bonds issued. The issuer is able to create liquidity in an otherwise illiquid asset by securitizing them. The instruments are credit rated and may be listed on stock exchanges.

Financial Innovation is a continuous process and new products keep hitting financial markets on day to day basis.

2.3 Structure of Securities Market

The market in which securities are issued, purchased by investors, and subsequently transferred among investors is called the securities market. The securities market has two interdependent and inseparable segments:

Primary Market: The primary market, also called the new issue market, is where issuers raise capital by issuing securities to investors. Fresh securities are issued in this market.

Secondary Market: The secondary market facilitates trades in already-issued securities, thereby enabling investors to exit from an investment or new investors to buy the already existing securities.

The primary market facilitates creation of financial assets, and the secondary market facilitates their marketability/tradability which makes these two segments of Financial Markets - interdependent and inseparable. We shall look at each of the markets in detail in the next section.

Ways to Issue Securities

2.3.1 Primary Market

As stated above, primary market is used by companies (issuers) for raising fresh capital from the investors. Primary market offerings may be a public offering or an offer to a select group of investors in a private placement program. The shares offered may be new shares issued by the company, or it may be an offer for sale, where an existing large investor/investors or promoters offer a portion of their holding to the public. Let us understand various terms used in the Primary Market.

Public issue - Securities are issued to the members of the public, and anyone eligible to invest can participate in the issue. This is primarily a retail issue of securities.

Initial Public Offer (IPO) - An initial public offer of shares or IPO is the first sale of a corporate's common shares to investors at large. The main purpose of an IPO is to raise equity capital for further growth of the business. Eligibility criteria for raising capital from the public investors is defined by SEBI in its regulations and include minimum requirements for net tangible assets, profitability and net-worth. SEBI's regulations also impose timelines within which the securities

must be issued and other requirements such as mandatory listing of the shares on a nationwide stock exchange and offering the shares in dematerialized form etc.

Follow on Public Offer (FPO) - When an already listed company makes either a fresh issue of securities to the public or an offer for sale to the public, it is called FPO. When a company wants additional capital for growth or desires to redo its capital structure by retiring debt, it raises equity capital through a fresh issue of capital in a follow-on public offer. A follow-on public offer may also be through an offer for sale, which usually happens when it is necessary to increase the public shareholding in the company to meet the regulatory requirements.

Private Placement - When an issuer makes an issue of securities to a select group of persons and which is neither a rights issue nor a public issue, it is called private placement. This is primarily a wholesale issue of securities to institutional investors. It could be in the form of a Qualified Institutional Placement (QIP) or a preferential allotment.

According to Companies Act 2013, an offer to subscribe to securities, made to less than 50 persons, is called private placement of securities. The requirements of SEBI's regulations with respect to a public issue will not apply to a private placement. A privately placed security can seek listing on a stock exchange provided it meets the listing requirements of SEBI and the stock exchange. Private placement of securities can be done by a company irrespective of whether it has made a public offer of shares or not.

Qualified Institutional Placements (QIPs) - Qualified Institutional Placement (QIP) is a private placement of shares made by a listed company to certain identified categories of investors known as Qualified Institutional Buyers (QIBs). QIBs include financial institutions, mutual funds and banks among others.

SEBI has defined the eligibility criterion for corporates to be able to raise capital through QIP and other terms of issuance under QIP such as quantum and pricing etc.

Preferential Issue - Preferential issue means an issue of specified securities by a listed issuer to any select person or group of persons on a private placement basis and does not include an offer of specified securities made through a public issue, rights issue, bonus issue, employee stock option scheme, employee stock purchase scheme or qualified institutions placement or an issue of sweat equity shares or depository receipts issued in a country outside India or foreign securities. The issuer is required to comply with various provisions defined by SEBI, which inter-alia include pricing, disclosures in the notice, lock-in, in addition to the requirements specified in the Companies Act.

Rights and Bonus Issues - Securities are issued to existing shareholders of the company as on a specific cut-off date, enabling them to buy more securities at a specific price (in case of rights) or without any consideration (in case of bonus). Both rights and bonus shares are offered in a particular ratio to the number of securities held by investors as on the record date. It is also important to understand that rights are like options and investors may or may not choose to exercise their rights i.e. apply for additional shares offered to them. On the other hand, in case of bonus, additional shares are conferred on to the existing shareholders (without any consideration) by capitalization of reserves in the balance sheet of the company.

Onshore and Offshore Offerings - While raising capital, issuers can either issue the securities in the domestic market and raise capital or approach investors outside the country. If capital is raised from domestic market, it is called onshore offering and if capital is raised from the investors outside the country, it is termed as offshore offering.

Offer for Sale (OFS) – An Offer for Sale (OFS) is a form of share sale where the shares offered in an IPO or FPO are not fresh shares issued by the company, but an offer by existing shareholders to sell shares that have already been allotted to them. An OFS does not result in increase in the share capital of the company since there is no fresh issuance of shares. The proceeds from the offer goes to the offerors, who may be a promoter(s) or other large investor(s). The disinvestment program of the Government of India, where the government offers shares held by it in Public Sector Undertakings (PSUs), is an example of OFS. It may be stated that OFS is a secondary market transaction done through the primary market route.

2.3.2 Secondary Market

While the primary market is used by issuers for raising fresh capital from the investors through issue of securities, the secondary market provides liquidity to these instruments. An active secondary market promotes the growth of the primary market and capital formation, since the investors in the primary market are assured of a continuous market where they have an option to liquidate/exit their investments. Thus, in the primary market, the issuers have direct contact with the investors, while in the secondary market, the dealings are between investors and the issuers do not come into the picture. Secondary market can be broadly divided into two segments:

Over-The-Counter Market (OTC Market) - OTC markets are the markets where trades are directly negotiated between two or more counterparties. In this type of market, the securities are traded and settled over the counter among the counterparties directly.

Exchange Traded Markets - The other option of trading in securities is through the stock exchange route, where trading and settlement is done through the stock exchanges. The trades executed on the exchange are settled through the clearing corporation, which acts as a counterparty and guarantees the settlement of the trades to both buyers and sellers.

Trading - A formal contract to buy/sell securities is termed as trading. As defined above, trading can be done either in the Over-The-Counter (OTC) market or the Exchange Traded Market. Stock exchanges in India feature an electronic order-matching system that facilities efficient and speedy execution of trades.

Clearing and Settlement - Clearing and settlement are post trading activities that constitute the core part of equity trade life cycle. Clearing activity is all about ascertaining the net obligations of buyers and sellers for a specific time period. And, settlement is the next step of settling obligations by buyers and settlers - Paying money (if transaction is a buy transaction) or delivering securities (if it is a sell transaction).

While OTC transactions are settled directly between the counterparties, clearing house or corporation is the entity through which settlement of securities takes place for all the trades done on Stock Exchanges. The details of all transactions performed by the brokers are made available to the Clearing house by the Stock exchange. The Clearing House gives an obligation report to Brokers and Custodians who are required to settle their money or securities obligations within the specified deadlines, failing which they are required to pay penalties. In practice, the clearing corporation provides full novation of contracts between buyers and sellers, which means it acts as buyer to every seller and seller to every buyer. As a result, the operational risk of the transaction is substantially reduced.

Risk Management - In OTC transactions, counterparties are supposed to take care of the credit risk on their own. In exchange traded world, the clearing corporation, as defined above, gives settlement guarantee of trades to the counterparties (all buyers and sellers). This exposes the clearing corporation to the risk of default by the buyers and sellers. To handle this risk, the clearing corporation charges various kinds of margins, most prominent among these margins are Initial or upfront margin and mark to market (MTM) margins. Initial margin is a percentage of transaction value arrived at based on concept of “Value At Risk” philosophy and MTM margin is the notional loss which an outstanding trade has suffered during a specified period on account of price movements.

2.4 Various Market Participants and Their Activities

Market Participants in Securities Market include buyers, seller and various intermediaries between the buyers and sellers. Some of these entities are defined in brief here:

2.4.1 Market Intermediaries

Stock Exchanges - Stock Exchanges provide a trading platform where buyers and sellers can transact in already issued securities. Stock markets such as NSE, BSE and MSEI are nationwide exchanges. Trading happens on these exchanges through electronic trading terminals which feature anonymous order matching. Stock exchanges also appoint clearing and settlement agencies and clearing banks that manage the funds and securities settlement that arise out of these trades.

Depositories - Depositories are institutions that hold securities (like shares, debentures, bonds, government securities, mutual fund units) of investors in electronic form. Investors open an account with the depository through a registered Depository Participant. They also provide services related to transactions in the securities held in dematerialized form. Currently there are two Depositories in India that are registered with SEBI:

- Central Depository Services Limited (CDSL), and
- National Securities Depository Limited (NSDL)

Depository Participant - A Depository Participant (DP) is an agent of the depository through which it interfaces with the investors and provides depository services. Depository participants enable investors to hold and transact in securities in the dematerialized form. While the investor-level accounts in securities are held and maintained by the DP, the company level accounts of securities issued is held and maintained by the depository.

Depository Participants are appointed by the depository with the approval of SEBI. Public financial institutions, scheduled commercial banks, foreign banks operating in India with the approval of the Reserve Bank of India, state financial corporations, custodians, stock- brokers, clearing corporations /clearing houses, NBFCs and Registrar to an Issue and Share Transfer Agents complying with the requirements prescribed by SEBI, can be registered as a DP.

Trading Members/Stock Brokers & Sub-Brokers - Trading members or Stock Brokers are registered members of a Stock Exchange. They facilitate buy and sell transactions of investors on stock exchanges. All secondary market transactions on stock exchanges have to be essentially conducted through registered brokers of the stock exchange. Trading members can be individuals (sole proprietor), Partnership Firms or Corporate bodies, who are permitted to

become members of recognized stock exchanges subject to fulfilment of minimum prudential requirements.

A sub-broker is an entity who is not a member of Stock Exchange but who acts on behalf of a trading member or Stock Broker as an agent for assisting the investors in buying, selling or dealing in securities through such trading member or Stock Broker with whom he is associated. Sub-brokers help in expanding the reach of brokers to a larger number of investors.

Trades have to be routed only through the trading terminals of registered brokers of an exchange, to be accepted and executed on the electronic system. Sub-brokers in remote locations who do not have electronic facilities offer trading services to their customers through phone or physical orders formats. The main broker to whom they are affiliated then enters these trades into the system. Broker-members of exchanges can complete transactions on the exchange only electronically. Brokers can trade on their own account too, using their own funds. Such transactions are called proprietary trades.

SEBI registration to a broker is granted based on factors such as availability of adequate office space, equipment and manpower to effectively carry out his activities, past experience in securities trading etc. SEBI also ensures the capital adequacy of brokers by requiring them to deposit a base minimum capital with the stock exchange and limiting their gross exposures to a multiple of their base capital.

Brokers receive a commission for their services, which is known as brokerage. Maximum brokerage chargeable to customers is fixed by individual stock exchanges.

Several brokers provide research, analysis and recommendations about securities to buy and sell, to their investors.

Authorised Person – Authorised person is any person (individual, partnership firm, LLP or body corporate), who is appointed by a stock broker or trading member as an agent to reach out to the investors scattered across the country. A stock broker may appoint one or more authorised person(s) after obtaining specific prior approval from the stock exchange concerned for each such person. The approval as well as the appointment of authorized person(s) is for a specific segment of the exchange.

Custodians - A Custodian is an entity that is charged with the responsibility of holding funds and securities of its large clients, typically institutions such as banks, insurance companies, and foreign portfolio investors. Besides safeguarding securities, a custodian also settles transactions in these securities and keeps track of corporate actions on behalf of its clients. It helps in:

- Maintaining a client's securities and funds account
- Collecting the benefits or rights accruing to the client in respect of securities held
- Keeping the client informed of the actions taken or to be taken on their portfolios.

Clearing Corporation - Clearing Corporations play an important role in safeguarding the interest of investors in the Securities Market. Clearing agencies ensure that members on the Stock Exchange meet their obligations to deliver funds or securities. These agencies act as a legal counter party to all trades and guarantee settlement of all transactions on the Stock Exchanges. It can be a part of an exchange or a separate entity.

Clearing Banks - Clearing Bank act as an important intermediary between clearing members and the clearing corporation. Every clearing member needs to maintain an account with the clearing bank. It is the clearing member's responsibility to make sure that the funds are available in its account with clearing bank on the day of pay-in to meet the obligations arising out of trades executed on the stock exchange. In case of a pay-out, the clearing member receives the amount in their account with clearing bank, on pay-out day.

Merchant Bankers - Merchant bankers are entities registered with SEBI and act as issue managers, investment bankers or lead managers. They help an issuer access the security market with an issuance of securities.

They are single point contact for issuers during a new issue of securities. They evaluate the capital needs of issuers, structure an appropriate instrument, get involved in pricing the instrument and manage the entire issue process until the securities are issued and listed on a stock exchange. They engage and co-ordinate with other intermediaries such as registrars, brokers, bankers, underwriters and credit rating agencies in managing the issue process.

Underwriters - Underwriters are intermediaries in the primary market who undertake to subscribe any portion of a public offer of securities which may not be bought by investors. They serve an important function in the primary market, providing the issuer the comfort that if the securities being offered to public do not elicit the desired demand from investors, they (underwriters) will step in and buy the securities. When the underwriters make their commitments at the initial stages of the IPO, it is called hard underwriting. Soft underwriting is the commitment given once the pricing is determined. The shares that devolve are usually placed with other financial institutions, thereby limiting the risk to the underwriter. Soft underwriting also comes with a clause that provides the option to exit from the commitment in the event of certain events occurring. The risk in hard underwriting is much higher than in soft underwriting.

2.4.2 Institutional Participants

An investor is the backbone of the securities market in any economy as the one lending surplus resources to companies for their productive activities. Investors in securities market can be broadly classified into Retail Investors and Institutional Investors.

Institutional Investors comprise domestic financial institutions, Banks, Insurance Companies, Mutual Funds and Foreign Portfolio Investors. Some of them are defined here in brief:

Foreign Portfolio Investors (FPIs) - A Foreign Portfolio investor (FPI) is an entity established or incorporated outside India that proposes to make investments in India. These international investors must register with the regulator - Securities and Exchange Board of India (SEBI) to participate in the Indian Securities Market.

P-Note Participants - Participatory Notes (P-Notes or PNs) are instruments issued by SEBI registered foreign portfolio investors to overseas investors, who wish to invest in the Indian stock markets without registering themselves with the market regulator - Securities and Exchange Board of India. P-Notes provide access of Indian securities to these investors.

Mutual Funds - A mutual fund is a professionally managed collective investment scheme that pools money from many investors to purchase securities on their behalf. Mutual fund companies invest the pooled money in stocks, bonds, and other securities, depending upon the investment objective of the scheme which is stated upfront. A fund manager, with the help of a research team, takes all the major decision in terms of which companies to invest in, the percentage of each stock in the portfolio, when to exit and so on. Each investor owns units, which represent a portion of the holdings of the fund. Diversification of investments is an important aspect of Mutual Funds investing. It helps in reducing the risk in investment for the investor. As a result, the investor is less likely to lose money on all the investments at the same time.

Insurance Companies - Insurance companies' core business is to ensure assets. Depending on the type of assets that are insured, there are various insurance companies like life insurance and general insurance etc. These companies have huge corpus and they are one of the most important investors in the Indian economy by investing in equity investments, government securities and other bonds. Like mutual funds, each Insurance company also has designated people who are responsible for investment decisions.

Pension Funds - A fund established to facilitate and organize the investment of the retirement funds contributed by the employees and employers or even only the employees in some cases.

The pension fund is a common asset pool meant to generate stable growth over the long term, and provides a retirement income for the employees.

Pension funds are commonly run by a financial intermediary for the company and its employees, although some larger corporations operate their pension funds in-house. Pension funds control relatively large amount of capital and represent the largest institutional investors.

Venture Capital Funds - A venture capital fund refers to a pooled investment vehicle like mutual fund but with mandate to invest money in enterprises that are in the early stage of development but with the potential of long-term growth. The longer gestation period and higher risk of failure make it difficult for such companies to access conventional sources of finance, such as banks and the capital markets. Venture capitalists bring managerial and technical expertise as well along with capital to their investee companies.

Private Equity Firms - Private equity is a term used to define funding available to companies in the early stages of growth, expansion or buy-outs. Investee companies may be privately held or publicly traded companies. The term private equity includes venture capital firms. The money in the fund is contributed by investors, called limited partners, and invested and managed by the general partner(s). Some of the private equity funds are specialized funds with competence in a particular industry, stage of the company, or targeted deals such as funding buyouts.

Hedge Funds - A hedge fund is an investment vehicle that pools capital from a number of investors and invests that across the assets, across the products and across the geographies. These fund managers generally have very wide mandate to generate return on the invested capital. They hunt for opportunities to make money for their investors wherever possible. In that sense, actually, term hedge fund is misnomer as these funds may not necessarily be hedged.

Alternative Investment Funds - Generally, investments in stocks, bonds, fixed deposits or real estates are considered as traditional investments. Anything alternate to this traditional form of investments is categorized as alternative investment. Even within investments in stocks, if the investments are in the stocks of small and medium scale enterprises (SMEs), it gets categorized as alternative investments in many jurisdictions (For instance, the SME exchange is called as Alternative Investment Market (AIM) in UK).

In India, alternative investment funds (AIFs) are defined in Regulation 2(1) (b) of Securities and Exchange Board of India (Alternative Investment Funds) Regulations, 2012. It refers to any privately pooled investment fund, (whether from Indian or foreign sources), in the form of a

trust or a company or a body corporate or a Limited Liability Partnership (LLP) which are not presently covered by any Regulation of SEBI governing fund management (like, Regulations governing Mutual Fund or Collective Investment Scheme) nor coming under the direct regulation of any other sectoral regulators in India - IRDAI, PFRDA, RBI etc.

Investment Advisers - Investment advisers work with investors to help them decide on asset allocation and make a choice of investments based on an assessment of their needs, time horizon return expectation and ability to bear risk. They may also be involved in creating financial plans for investors, where they help investors define their financial goals and propose appropriate saving and investment strategies to meet these goals.

2.4.3 Retail Participants

Retail Investors include individual investors who buy and sell securities for their personal account, and not for another company or organization. HNIs or High Net-worth Individuals and UHNIs (Ultra High net-worth individuals) are individual investors who invest large sums of money in the market. Reserve Bank of India has also granted general permission to Non Resident Indians (NRIs), Person of Indian origin (PIOs) and Qualified Foreign Investors (QFIs) for undertaking direct investments in Indian companies under the Automatic Route.

2.5 Kinds of Transactions

We may undertake several kinds of transactions in the securities market ranging for immediate settlement to the distant settlement. Transaction types also vary based on transactions in the stock market or outside the stock market (called OTC Trades). A brief description about different kinds of transaction is given below:

2.5.1 Cash, Tom and Spot Trades/Transactions

Cash trades are the trades where settlement (payment and delivery) occurs on the same trading day (T+0, where 0 defines the time gap in days between trade day and settlement day). Cash trades in Financial Markets are unusual as most contracts are settled between two to three days from the date of trade. However, we see cash transactions in our normal day to day life all the time when we buy groceries, vegetables and fruits from the market.

Tom trades are the trades where settlement (payment and delivery) occurs on the day next to the trading day (T+1, where 1 defines the time gap in days between trade and settlement day). Some of the transactions in Foreign Exchange Market (FX market) settle on T+1 basis.

Spot trades are the trades where settlement (payment and delivery) occurs on the spot date, which is normally two business days after the trade date. Equity markets in India offer Spot trades. FX markets, globally, by default, offer spot transactions in the foreign exchange.

2.5.2 Forward transactions

Forward contracts are contractual agreement between two parties to buy or sell an underlying asset at a certain future date for a particular price that is decided on the date of contract. Both the contracting parties are committed and are obliged to honour the transaction irrespective of price of the underlying asset at the time of settlement. Since forwards are negotiated between two parties, the terms and conditions of contracts are customized. These are Over-the-counter (OTC) contracts.

Example:

A farmer agrees to sell his produce of wheat to a miller, 6 months later when his crop is ready, at a price that both counterparties agree today.

This is an OTC executed forward contract. It can be settled in cash or result in actual delivery of wheat. The settlement terms such as quantity and quality of wheat, the price and payment terms, reference benchmark in case of cash settlement of contract etc. are decided by the counterparties at the time of entering into contract. These contracts carry counterparty risk if either of the parties in the trade fails to honour his side of the contract. Therefore, these contracts are generally entered between known parties and leans on informal protection mechanisms to ensure that the contract is honoured. The forward markets in commodities in several parts of India are based on mutual trust and are functional despite the risks involved.

2.5.3 Futures

Futures are standardized exchange traded forward contracts. They are standardized as to the market lots (traded quantities), quality and terms of delivery - delivery date, cash settlement or physical delivery etc. As these contracts are traded and settled on a stock exchange and the clearing corporation provides settlement guarantee on them, they are subject to stringent requirements of margins by the clearing corporations. Futures contracts are available on variety of assets including equities and equity indices, commodities, currencies and interest rates.

Example:

Wheat futures traded on the Multi-commodity Exchange (MCX) of India has the following specifications (among others):

Trading unit: 10MT

Minimum order size: 500MT

Maximum position per individual: 5000 MT

Quality: Standard Mill Quality as specified by the exchange

Contract begin date: 21st of the month

Delivery options: Physical delivery only

Delivery date: 20th of the month

Delivery centre: Exchange approved warehouses

2.5.4 Options

An Option is a contract that gives the right, but not an obligation, to buy or sell the underlying asset on or before a stated date and at a stated price. The buyer or holder of the option pays the premium and buys the right, the writer or seller of the option receives the premium with the obligation to sell or buy the underlying asset, if the buyer exercises his right.

Based on the type of contract, options can be divided into two types.

- ***Call*** gives the buyer the right, but not the obligation, to buy a given quantity of the underlying asset, at a given price on or before a given future date.
- ***Put*** gives the buyer the right, but not the obligation, to sell a given quantity of the underlying asset at a given price on or before a given date.

Options can be transacted both in OTC Market and Exchange Traded Markets.

Example:

Arvind buys a call option on the Nifty 50 index from Salim, to buy the Nifty 50 at a value of 8000, three months from today. Arvind pays a premium of Rs. 100 to Salim. What does this mean?

- Arvind is buyer of the call option.
- Salim is seller or writer of the call option.
- The contract is entered into today, but will be completed three months later on the settlement date.

- 8000 is the price Arvind is willing to pay for Nifty 50, three months from today. This is called the strike price or exercise price.
- Arvind may or may not exercise the option to buy Nifty 50 at 8000 on the settlement date. But if he exercises the option, Salim is under obligation to sell the Nifty 50 at 8000 to Arvind.
- Arvind pays Salim Rs. 100 as the upfront payment. This is called the option premium or price of the option.
- On settlement date, if Nifty 50 is at 8200. This means Arvind's option is "in the money." He can buy the Nifty 50 at 8000 by exercising his option.
- Salim earns Rs. 100 as premium, but losses ultimately as he sells Nifty 50 at 8000 to meet his obligation when market price is 8200.
- On the other hand, if on the settlement date, Nifty 50 is at 7800, Arvind's option will be "out of the money."
- There is no point paying 8000 to buy the Nifty 50, when the market price is 7800. Arvind will not exercise the option. Salim will pocket Rs. 100, he collected as premium.

2.5.5 Swaps

A swap in the financial markets is a derivative contract made between two parties to exchange cash flows in the future according to a pre-arranged formula. Swaps help market participants manage risks associated with volatile interest rates, currency rates and commodity prices.

Example:

On a borrowing, borrower has to pay quarterly interest rate, which is defined as the Treasury bill rate on that date plus a spread. This floating rate interest payment means that the actual obligation of the borrower will depend on what the Treasury bill rate would be on the date of each settlement of interest obligation. The borrower, however, prefers to pay a fixed rate of interest.

He can use the interest rate swap market to get into the following swap arrangement:

- Pay a fixed rate to the swap dealer every quarter
- Receive T-bill plus spread from the swap dealer every quarter

The swap in this contract is that one party pays a fixed rate to the other, and receives a floating rate in return. The principal amount on which the interest will be computed is agreed upon between counterparties (called notional of the trade). Only the interest rate on this amount is exchanged on each settlement date (every quarter) between counterparties.

The borrower will use the floating rate that he has received from the swap market and pay the floating rate dues on his borrowing. These two legs are thus cancelled, and his net obligation is the payment of a fixed interest rate to the swap dealer. By using the swap market, the borrower has converted his floating rate borrowing into a fixed rate obligation.

2.5.6 Trading, Hedging, Arbitrage, Pledging of Shares

Trading - Trading or speculating is an act of purchase or sale of an asset in the expectation of a gain from changes in the price of that asset over a short period of time. Traders or speculators seek to benefit from acting on information which bring about changes in prices. Their actions increase liquidity in the market. Traders or Speculators typically leverage their trading activity with borrowed funds, which magnifies their gains as well as losses.

Hedging - Hedging is an act of taking position in the financial transactions to offset potential losses that may be incurred by another position. A hedge can be constructed from many types of financial instruments, including insurance, forward/futures contracts, swaps, options etc. A hedged position limits loss as well as gains, since appreciation in one position is squared-off by depreciation in the other position and vice versa.

Arbitrage - Arbitrage is simultaneous purchase and sale of an asset in an attempt to profit from discrepancies in their prices in two different markets. Buying a stock in the spot market and simultaneously selling that in the futures market to benefit from the price differential is an example of an arbitrage transaction. An important point to understand is that in an efficient market, arbitrage opportunities may exist only for short period or none at all. The existence of an arbitrage opportunity will increase buying in the lower-priced market leading to a rise in prices, and increased selling in the higher-priced market leading to a fall in prices ultimately resulting in closing the gap and elimination of the arbitrage opportunity between two markets.

Pledging of shares - Pledge is an act of taking loan against securities by the investor. The investor is called as 'pledgor' and the entity who is giving the loan against the securities is called as 'pledgee'. Securities held in a depository account can be pledged/ hypothecated to avail of loan/credit facility. When dematerialized securities are pledged, they remain in the pledgor's demat account but they are blocked so that they cannot be used for any other transaction. Pledged securities can be unpledged, once the obligations under pledge are fulfilled. In case of default, the pledgee can invoke the pledge.

2.6 Dematerialization and Rematerialization of securities

Dematerialization - Dematerialization is the process of converting securities held in physical form into holdings in book entry (electronic) form. In demat form, one investor's shares are not distinguished from another investor's shares and these shares do not have any distinctive number, folio number or certificate number. SEBI's regulations require a company making a public issue of shares to enter into an agreement with all the depositories to dematerialize its shares so that investors can be given the option of holding the shares in dematerialized form.

Rematerialization - Rematerialization is reverse of dematerialization and is the process of converting securities held in electronic form into physical form. On request of investors, Securities on rematerialization are allotted in physical form with distinctive numbers, in place of the securities held electronically in book-entry form with a depository.

Sample Questions

1. **As per SCRA, the term securities include which of the following?**
   a. Government Securities
   b. Derivatives
   c. Shares, scrips or bonds
   d. **All of the above**

2. **Along with SEBI and other regulators under Companies Act, RBI also regulates the Equity Shares Market. State whether True or False.**
   a. True
   b. **False**

3. **Where the entire face value of the debenture is converted into equity shares, it is known as _____.**
   a. **Fully Convertible Debenture**
   b. Party Convertible Debenture
   c. Optionally Convertible Debenture
   d. None of the above

4. **Depository Receipts which are issued in India and listed on an Indian Stock Exchange with foreign stocks as underlying shares, is known as _____.**
   a. ADRs
   b. GDRs
   c. **IDRs**
   d. FCCBs

CHAPTER 3: TERMINOLOGY IN EQUITY AND DEBT MARKETS

LEARNING OBJECTIVES:

After studying this chapter, you should know about:

- Terminology used in equity markets
- Terminology used in debt markets
- Different types of bonds

Security markets enable investors to deploy their surplus funds in investment instruments that are pre-defined for their features, issued under regulatory supervision, and in most cases liquid in the secondary markets. There are two broad types of securities that are issued by seekers of capital from investors: Equity and Debt. When a business needs capital to fund its operations and expansion, it makes a choice between these two types of securities.

Equity capital is available for the company to use as long as it is needed; debt capital will have to be returned after the specified time. Equity investors do not enjoy any fixed return or return of principal invested; debt investors earn a fixed rate of interest and return of principal at maturity. Equity investors are owners of the business; debt investors are lenders to the business. Equity investors participate in the management of the business; debt investors do not. Residual profits of the business belong to the equity investors; debt investors' claim is restricted to the periodic fixed coupons and principal repayment on maturity.

Due to these fundamental differences in equity and debt securities, they are seen as two distinct asset classes between which investors make a choice. Equity represents a risky, long-term, growth oriented investment that can show a high volatility in performance, depending on how the underlying business is performing. There is no assurance of return to the equity investor, since the value of the investment is bound to fluctuate. Debt represents a relatively lower risk, steady, income-oriented investment. It generates a steady rate of return, provided the business remains profitable and does not default on its payments. Since all residual benefits of deploying capital in a profitable business go to the equity investor, the return to equity investor is likely to be higher than that of the debt investors.

For example, if a business borrows funds at 12% and is able to earn a return of 14% on the assets created by such borrowing, the debt investor receives only 12% as promised. But the excess 2% earned by the assets, benefits the equity investor. The downside also hurts the

equity investor, who may not earn anything if the return is lower than the borrowing cost and if the business is failing.

Choosing between equity and debt is a trade-off. Investors desiring lower risk, and willing to accept a lower stable return choose debt; if they seek a higher return, they may not be able to earn it without taking on the additional risk of the equity investment. Most investors tend to allocate their capital between these two choices, depending on their expected return, their investing time period, their risk appetite and their needs.

This Chapter captures the features of Equity and Debt instruments along with other instruments which borrow features both from equity and debt.

3.1 Terminology in Equity Market

3.1.1 Face Value (FV)

The nominal price of a share is known as its face value. The equity capital of the company is calculated by multiplying the number of shares issued by its face value. For example, in case a company has issued 1 Lakh shares with Face Value Rs. 10, then the equity capital of the company would be Rs. 10 Lakh (1 Lakh * 10). Shares may be issued to the investors at the face value, or a price higher (premium) than the face value, or a price lower (discount) than the face value.

The face value of a company's share does not usually change unless the company decides to split or consolidate its shares. In such cases, the face value of company's shares would reduce (in case of split) or increase (in case of consolidation). For example, if an investor holds 1 share of Rs. 10 FV and the company decides to split its one share into five, then the new face value of its shares would be Rs. 2 and the investor would hold 5 such shares.

The face value of share is important for calculating the dividend payable on a share. When dividends are mentioned as a percentage, that percentage is reckoned with regard to the face value. For example, if a company with Face value of Rs. 10 declares 30% dividend, it means dividend of Rs. 3 per share. However, if a company with Face value of Rs. 2 declares 30% dividend, it means dividend of Rs. 0.60 per share.

3.1.2 Book Value

Book Value of a company is the net-worth of the company. To compute book value per share, net-worth of the company is divided by the number of outstanding shares. In simple terms,

book value per share means the theoretical amount of money each share would get in case the company was to wind up.

On left hand side of a balance sheet, there are primarily two things – share capital and debt. The assets of the company are listed in the balance sheet at its book value, i.e. cost less depreciation. The realizable value of these assets may be different from book value and is never known with certainty. If it is assumed that each asset on the Balance Sheet may be converted into cash at its book value, then after fully honouring the business liabilities, cash equivalent to net-worth (equity plus reserves) would be left for shareholders. The ability of the company to meet its liabilities would depend upon the realizable value of its assets.

3.1.3 Market Value

This is the market price of a share. The market value of the entire equity of a company is termed as market capitalization and is computed as market price per share multiplied by total number of outstanding shares. The market value of a share depends upon host of factors like the expected performance of the company, market sentiments and liquidity, among others.

3.1.4 Replacement Value

This refers to the market value of all the assets of a company at any point of time. If a new company were to set up with all the infrastructure/plants, which an already existing company has, then the cost which it would have to bear today is known as the 'Replacement Value' of the existing firm.

3.1.5 Intrinsic Value

Intrinsic Value of an asset is the present value of expected free cash flows from the asset. Warren Buffett defines the intrinsic value as *"It is the discounted value of the cash that can be taken out of a business during its remaining life."* In simple terms, the intrinsic value of an equity share is the discounted value of its future benefits to the investors. Investing in equity is about estimating this intrinsic value and paying a price today to earn the future value.

Market Value v/s Intrinsic Value

In equity investing, therefore, there are two distinct notions of value and price. Intrinsic value is the estimated value per equity share, based on the future earning potential of a company. Market price is the price at which the share trades in the stock market, taking into account several factors including various estimates of intrinsic value. Intrinsic value may be equal to, less than or more than the market price at any point in time.

If the intrinsic value is perceived to be more than market value, the scrip is said to be undervalued. If intrinsic value is perceived to be less than market value, the scrip is said to be overvalued. The goal of investment strategies is to buy undervalued shares and sell overvalued ones. But, it remains tough to make these evaluations correctly and consistently, as what is being priced is the unknown future of the company.

Equity investing requires identifying and exploiting inefficiencies and is not amenable to mathematical formulation. Qualitative factors that assess future potential of a company based on factors such as quality of management, marketing strategies, financing capabilities, and such, make equity investing an art as well as science. Stock markets where these estimates are made and acted upon through buying and selling of equity shares, feature a social ecosystem of complex human behaviour. Investment decisions are influenced by behavioural and cognitive limitations of individuals acting in a group.

3.1.6 Market Capitalization (Market Cap)

Market Capitalization (Market Cap), is the amount of money required to buy out an entire company at its current market price. It is computed as market price per share of the company multiplied by total number of outstanding shares.

For example, a company which has issued 1 Lakh shares and currently trades at Rs. 20 (Current Market Price) would have Market Cap of Rs. 20 Lakh (1 Lakh * Rs. 20). With change in equity prices, market capitalization of the companies change continuously.

Traded stocks are often categorised by Market Cap.

- Blue-chip stocks represent the largest companies by market cap. Given the large size of their market cap, they attract large set of investors both retail and institutional and enjoy a high level of liquidity. These are also called large cap stocks.
- Mid cap stocks refer to those companies which enjoy a good level of liquidity but are medium in terms of market cap size.
- Small cap stocks are those stocks that are smaller in size and therefore do not enjoy much liquidity.

There is no specific size for the cut-off of large, mid or small cap stocks. It is therefore common to consider the top 50 to 100 stocks by market capitalisation as large cap, the next 200 to 500 stocks as mid cap, and the remaining all as small cap stocks.

Market cap is also used as an indicator of the size and importance of the stock market of a country. The ratio of market cap to GDP of a country is a relevant measure for the purpose.

3.1.7 Enterprise Value

Enterprise Value (EV) is the theoretical takeover price of a firm. Along with Equity, it considers the debt as well as cash reserves of the company in determining its value. It is implicitly assumed that the debt of the company is a liability that also has to be taken over and accounted for in the price by the acquirer, while the cash reserves are available to the buyer and therefore deducted from the total value. EV may be defined mathematically as follows:

Enterprise value = Market value of equity (Market capitalization) + Market value of debt – cash and cash equivalents

Market Capitalization is arrived at by simply multiplying the market price with the number of outstanding equity shares. Market value of debt is generally taken as outstanding debt on the balance sheet of the company. This cost is reduced by any cash or cash equivalents on the balance sheet as that will be available to pay out debts of business. This is the price of the entire firm to a buyer.

For example, let us compute EV of a company with following information:

Market Cap = 20 Lakh

Total Debt = 3 Lakh

Cash = 4 Lakh

Then, EV = 20 Lakh + 3 Lakh – 4 Lakh = 19 Lakh

3.1.8 Earnings – Historical, Trailing and Forward

Earnings are profits in a business. Earnings can be defined at various levels. For example, net profits are the profits available to the equity owners. Earnings before Interest and Taxes (EBIT) are available to serve both equity and debt holders. Earnings before Depreciation Interest Taxes and Amortization (EBDITA) is the earning available to a business to replace its assets over a period of time and to serve both equity and debt holders. Earnings of previous years are called historical earnings.

Trailing, earnings refer to the earnings of the latest four quarters, calculated on a rolling basis. Earnings computed based on future projections are called forward earnings.

3.1.9 Earnings Per Share (EPS)

Net profits of the company belong to the shareholders. Earnings per share is the net profit divided by the number of shares. It indicates the amount of profit that company has earned, for every share it has issued.

EPS is calculated as:

EPS = Net Profit/ Number of shares outstanding

For a company with Net Profit of Rs. 10 Lakh and outstanding shares 2 Lakh, the EPS would be Rs. 5 (Rs. 10 Lakh/ 2 Lakh).

A higher EPS shows higher profitability and better earnings for the shareholders and will be preferred over shares of companies with lower EPS. EPS is a significant variable in determining a share's price.

3.1.10 Dividend Per Share (DPS)

Dividend is generally declared as a percentage of the face value of the shares. It is the portion of profit which the company distributes amongst its shareholders. For example, 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). This is known as Dividend Per Share (DPS).

3.1.11 Price to Earnings Ratio (PE Ratio)

Price to Earnings Ratio or the PE Ratio measures the price that the market is willing to pay for the earnings of a company. It is computed as:

Market price per share/Earnings per share

PE is referred as a multiple of per rupee of earnings. When one refers to a stock trading at PE multiple of 12x, it means the stock is trading at twelve times its earnings. The PE multiple based on historical earnings is of limited value. The prices change dynamically, while the reported earning is updated every quarter. Therefore, prices tend to move even after the historical earning per share is known, in anticipation of the future earnings.

If it is expected that earnings of a firm will grow, then the market will be willing to pay a higher multiple per rupee of earning. The focus is, therefore, on ‘prospective’ PE or how much the current price is discounting the future earnings. For example, when analysts say that shares of XYZ company is trading at 20 times its 2014 earnings, but is still about 15 times the 2015 earnings, given the state of its order book. What they are saying is that the growth in EPS is

likely to be high, and therefore the current high PE based on historical numbers may not be the right one to look at.

Most publications and reports show the PE using historical earning numbers from the latest quarterly reports. Analysts' estimates of future earnings are not widely available and they may vary. Some publications report 'consensus' view of prospective earnings.

It is common to look at the PE multiple of the index to gauge if the market is overvalued or undervalued. The PE multiple moves high when prices run ahead of the earnings numbers and the market is willing to pay more and more per rupee of earnings. When markets correct and uncertainty about future earnings increases, the PE multiple also drops. A value investor, who would like to pick up stocks when they are cheap, may be interested to purchase when PE is low.

Analysts also compare the PE of one company with another, to check the relative value. The PE multiple of a stable, large and well known company is likely to be higher than the PE multiple the market is willing to pay for another smaller, less known, and risky company in the same sector.

3.1.12 Price-to-Sales Ratio (P/S)

Price to Sales ratio is a valuation ratio that measures the price investors are willing to pay for each rupee of sales. It is calculated as:

P/S Ratio = Current Market Price (CMP) / Annual Net Sales per Share

Or

P/S Ratio = Market capitalization / Annual Net Sales

For example, a company with annual net sales of 1 Crore, outstanding shares of 10 Lakh and CMP of Rs. 40, P/S Ratio would be

Annual Net Sales per Share = 1 crore / 10 lakhs = 10

P/S Ratio = 40 / 10 = 4

A low P/S ratio may indicate an undervalued stock, and if it is paired with a trend of strong growing sales then it may be an attractive investment proposition. While a high P/S ratio indicates a highly priced stock, it may also indicate an expectation of high future growth rate in sales and therefore the market's willingness to pay a high price for it. A drop in the revenue

growth rate will be a high risk for these stocks. Like all multiples, the P/S ratio should be used along with other data and compared with similar companies in the industry before making an investment decision.

3.1.13 Price-to-Book Value Ratio (P/BV)

Price to Book Value Ratio is one of the most widely used ratio to find price relative to the value. The P/BV measures a company's current market price (CMP) vis a vis its book value. Book value is calculated by dividing net-worth by the number of outstanding shares.

The book value is the accounting value per share, in the books of the company. It represents the net-worth (capital plus reserves) per share. An important limitation of this number is that most assets on the books of the company are shown at their historical cost less depreciation and not their realizable/liquidation value. However, in a company which has been building reserves from sustained profitability, the book value is an important indicator of value. Since the book value considers the net-worth of a company, it is an important number in fundamental analysis.

For example, let us compute P/BV of a company with following information:

Equity Capital: Rs. 10 Lakhs

Reserves & Surplus: Rs. 50 Lakhs

Number of shares outstanding: 6 lakhs

Current Market Price: Rs. 20

Then, BV would be:

Net-worth/ Number of shares outstanding = (Rs. 10 Lakhs + Rs. 50 Lakhs)/ 6 Lakhs = Rs. 10

And, P/ BV would be:

P/BV = CMP/BV = 20/10 = 2x

Hence P/ BV ratio of this company would be 2 times.

P/BV less than 1 indicates the company is trading below its book value, and hence the stock is deemed to be undervalued. However, it is pertinent to ask, ‘why is the market pricing the share at a price less than BV?’ Please note that there may be several reasons for a stock being available for less than its book value including the poor investments made by the firm in the

past which need to be written down subsequently. Hence, all the companies with P/BV less than 1 may not be value buys. Investors should not rely only on PBV for their investment decisions and should understand that not all stocks that trade at a discount on their book values are bargains (undervalued).

PBV is a useful measure to value stocks where the earnings are negative and the more widely used PE ratio is not applicable. It enables comparison across companies in an industry where accounting standards are consistent. It is a good measure to value stocks of companies, such as in the banking industry. However, for sectors such as the service industry where assets are limited, this valuation method may not be relevant.

3.1.14 Differential Voting Rights (DVR)

A DVR is just like a normal share of a company, except that it carries less than 1 voting right per share unlike a common share. Such an instrument is useful for issuers who wish to raise capital without diluting voting rights. Investors who wish to invest only for dividends and capital appreciation and are not really bothered about voting rights find these shares attractive. The number of voting rights for a DVR differ from company to company. DVRs typically trade as a separate category of instrument and are available at a discount to the common shares of a company. The Companies Act, 2013 defines the eligibility of a company to issue such shares. This includes a dividend of at least 10% over the preceding 3 years and such shares shall not exceed 25% of the total post-issue paid up capital of the company. Several companies in India including Tata Motors and Pantaloons have issued DVRs.

3.2 Terminology in Debt Market

Debt capital refers to the capital provided by the lenders who are keen to be compensated regularly in the form of a pre-specified fixed rate of interest. They also expect the money they have lent to be returned to them after an agreed period of time. Debt can be created by borrowing from banks and other institutions or by issuing debt securities. For example, if a company wishes to borrow Rs. 100 crore, it has two options. If it takes a bank loan for the total amount, then the bank, or consortium of bankers, is the sole lender to the company. Alternately, it can access a larger pool of investors by breaking up the loan amount into smaller denominations. If it issues one crore debt securities, each with a face value of Rs. 100, then an investor who brings in Rs. 1000 would receive 10 securities. The lending exposure of each investor is limited to the extent of his investment.

A debt security denotes a contract between the issuer (company) and the lender (investor) which allows the issuer to borrow a sum of money at pre-determined terms. These terms are

referred to as the features of a debt security and include the principal, coupon, the maturity of the security and the security, if any, provided for the lending.

All debt securities grant the investor the right to coupon payments and principal repayment as per the debt contract. Some debt securities, called secured debt, also give investors rights over the assets of the issuing company. If there is a default on interest or principal payments, those assets can be sold to repay the investors. Investors with unsecured debt do not enjoy this option.

Debt securities may be privately placed with a select group of investors or offered to public through a public issue of the securities. Debt securities that are issued in a public issue are mandatorily listed on stock exchanges such as National Stock Exchange or Bombay Stock Exchange, so that they can be traded in the secondary market. Unlisted securities have to be held until maturity or traded in the Over the counter (OTC) market.

Given below are some of the commonly used terms of debt instruments.

3.2.1 Face Value

Any debt instrument cannot be completely explained without answering how much borrowing it represents, for how long has the money been lent and what is the interest rate on the same. The first question is answered by the term Face Value, which represents how much loan is represented by that particular debt paper. This is the nominal or par value of the debt paper and interest, throughout the term of the paper, is paid as a percentage of this amount. The face value may be Rs. 100 or Rs. 1000 or any other denomination.

3.2.2 Coupon Rate

Interest paid on the bond/debt security is known as Coupon rate, expressed as a percentage of its face value. The actual amount of money which the investor receives as interest is equal to the product of the face value and the coupon rate.

Thus a 8.24% GS2018 (read as 8.24% coupon bearing Government Security (G-Sec) maturing in 2018) with face value Rs. 1000, would pay Rs. 82.40 as coupon (interest) each year, till maturity, to the investor. G-Secs pay interest semi-annually. So in this case, the investor would get Rs. 41.2 (82.4/2) every 6 months. The last coupon payment will be received on the maturity date along with the principal (par value).

3.2.3 Maturity

Every loan will have a tenure. This is known as 'tenor' or 'maturity' or 'term to maturity' in bond markets. In the above mentioned bond, its maturity is in the year 2018.

Maturity is a very significant parameter for bond investors as this is the single largest factor contributing to changes in bond prices and the market risk in bond investment is linked to it. Bonds can be issued for extremely short tenure, like T-Bills issued by the Government of India (GoI) for 91, 182 and 364 days or G-sec issued for very long periods, even up to 30 years or more. Some bonds issued are perpetual in nature. The term to maturity keeps reducing with each passing day and finally becomes 'zero' on the date the bond matures. The bond is redeemed on this day.

3.2.4 Principal

This is the amount of borrowing of the issuer represented by the security. This is the initial investment which an investor makes when the bond is issued and is represented by face value. On redemption, this entire principal is returned to the investor.

As the bond starts trading in the market, the price at which it is purchased and sold may be different from the stated face value. Irrespective of the price at which a debt security is bought in the secondary market, the issuer is liable to repay only the principal, represented by the face value, on maturity.

3.2.5 Redemption of a Bond

When a bond matures, the investor 'redeems' the bond, which essentially means that the contract between the issuer and the investor is over. The issuer of the bond repays the principal and also makes the final coupon payment and then the bond ceases to exist, or the bond 'matures'.

3.2.6 Holding Period Returns (HPR)

Holding Period Return (HPR) is the return earned on an investment during a specific period when it was bought and held by the investor. An investor may purchase the bond from the issuer directly when it is issued, or may purchase at any later date from the secondary market. Similarly, the investor may hold the bond till maturity or may exit earlier in between by selling on the secondary market. The returns to the investor for the period for which the bond was held is known as HPR.

Through the period for which the bond is held, the investor would receive coupon payments. These coupons may be re-invested to earn interest at the rate prevalent at the time of re-investment. Further, the investor will make a gain or loss at the time of selling the bond, depending upon whether the sale price is higher or lower than his purchase price. Adding all these three incomes and expressing it as a percentage of the cost price would be the HPR for the investor.

If an investor purchases a bond at Rs. 104, earns Rs. 8 as coupon, which he reinvests at 7% for a period of 1 year, and finally sells the bond at Rs. 110 after 1 year then his HPR would be:

HPR = [(8) + (8 * 7%) + (110-104)]/ 104 = 14.00%

It must be noted that HPR is single period return and does not annualize the return to the investors.

3.2.7 Current Yield

This is a simple method of calculating return on a debt security in which the coupon is divided with the current market price of the bond and the result is expressed as percentage. This method does not take into account future cash flows coming from the bond, which is the biggest drawback of this method and hence this method is not really used widely. It can be compared to the dividend yield of a stock.

Suppose the 8.24% GS2018 is trading at Rs. 104, the current yield would be:

Current Yield = (8.24/104) = 0.07923 = 7.92%

Yield to Maturity (YTM):

Yield to Maturity or YTM is a more comprehensive and widely used measure of return calculation of a debt security than current yield. This method takes into consideration all future cash flows coming from the bond (coupons plus the principal repayment) and equates the present values of these cash flows to the prevailing market price of the bond. The rate which equates the present outflow (price of the bond which the investor needs to pay in order to purchase the bond) with the present value of future inflows (coupons plus principal) is known as YTM. Thus, it can be understood as the Internal Rate of Return (IRR) of the bond.

The YTM can be calculated by trial and error method by plugging in different rates in the equation and arriving at the one that equates the market price of bond to the present value of the expected cash flows from the bond. It can also be calculated using the XIRR function in Excel. 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%**

YTM, though better than current yield, and also widely used, has its own shortcomings. First, it assumes that the investor will hold the bond till maturity, which may or may not be the case. Second, it assumes that the coupons received periodically are reinvested for the remaining tenor of the bond at the same rate throughout the tenor. This assumption implies that interest rates would remain same for the entire tenor and that the rates would also be same across tenors, which means the yield curve would be static and flat. This assumption takes YTM away from being practical. However, YTM has its own advantages, biggest of which being that it is simple and quick computation and hence it is widely used.

3.2.8 Duration

Duration measures the sensitivity of the price of a bond to changes in interest rates. Bonds with high duration experience greater increases in value when interest rates decline and greater losses in value when rates increase, compared to bonds with lower duration.

Duration is the weighted average maturity of the bond, where the present values of the future cash flows are used as weights. Duration thus incorporates the tenor, coupon and yield in its calculation.

Higher the time to maturity, higher the duration and hence higher the interest rate risk of the bond. Lower the coupon rate, higher the duration and hence higher the interest rate risk of the bond. And, Lower the yield, higher the duration and hence higher the interest rate risk of the bond.

Thus, Duration is a very convenient interest rate risk measure for bonds. Higher the duration higher the sensitivity of bonds prices vis a vis interest rates.

The duration of a bond is not a static number, but will change with a change in the tenor and yield of the bond. As a bond comes closer to maturity, its duration also decreases and makes the bond less riskier.

Modified Duration (M Duration)

Modified Duration measures the impact of changes in interest rates on the price of the bond. While Duration gives us sensitivity of bond prices to change in interest rates, Modified Duration gives us the magnitude of this change.

M Duration is calculated as:

M Duration (D*) = - Duration/ (1 + YTM)

The negative sign indicates the inverse relationship between bond prices and interest rates. When interest rates rise, bond holders experience a fall in the price of bonds they hold which pay a lower coupon rate on their principal, as compared to new bonds which would be issued in line with higher interest rates. New buyers of bonds would not pay the same price for the old bonds, as for the same investment in new bonds, they would get a higher coupon. To bring both the bonds at the same level, the prices of old bonds would fall so that the yield on these bonds is same as the yield on the new ones.

Similarly, when rates fall, the old bonds with high coupon rates would become attractive by the same logic.

Change in price of a bond would be calculated as the product of M Duration and percentage change in yield.

Suppose a bond has M Duration of 4.3, then a small change of 0.25% (25 basis points or 25 bps) would mean the price of the bond would change by (4.3 * 25/100) = 1.075% in the opposite direction.

3.2.9 Convexity

The impact of change in interest rates on bond prices is inverse but not linear. This means when rates go up, bond prices go down; but they don’t fall as much as they would rise when rates go down by the same magnitude.

Thus, rise in bond prices is more than its fall, for the same movement in interest rates in downward and upward directions respectively. This unique property of bond prices is known as Convexity. It must be noted that M Duration is applicable only for small changes in interest

rates as for larger changes, it would show a straight line movement in prices, which would be incorrect. Thus M Duration is only useful at that point where the straight line would be tangential to the price yield curve. Bond fund managers look for bonds with high convexity as these do not fall much in rising interest rate scenario but rise more when rates are falling.

This can be understood from the table below:

Consider a situation where a bond with maturity of 2 years is trading at Rs. 100 initially. This will happen when Coupon and YTM are same (assume 8%).

Now if we increase the YTM to 9%, the price of the bond falls to Rs. 98.21; i.e. a fall of 1.79%, whereas if the YTM were to fall by the same magnitude, 1%, the bond price rises by 1.83% to Rs. 101.83.

Settlement Date	20-Nov-14	20-Nov-14	20-Nov-14
Maturity Date	19-Nov-16	19-Nov-16	19-Nov-16
Coupon	8%	8%	8%
Yield (YTM)	8.00%	9.00%	7.00%
Frequency of Int. payment	2	2	2
Face Value	100	100	100
Price	100	98.21	101.83
Change in Price		-1.79%	1.83%

Hence, we can see that rise and fall in bond prices for same change in YTMs is not linear but convex. As stated above, bonds fall less for rise in interest rates than they rise for a fall in the interest rates of same magnitude.

3.3 Types of Bonds

As defined in the previous section, Bonds are securities which represent a loan. For a loan to be completely defined, the loan amount, time for which the loan is taken and the rate at which it is taken, must be known. These three are known as Principal, Maturity and Coupon respectively in bonds. Each of these features can be modified to construct various types of bonds. Bonds are also classified based on the type of the issuer and its credit worthiness.

Given below are some of the commonly found types of bonds.

3.3.1 Zero-Coupon Bond

Bonds which do not pay coupon in their entire term are known as Zero Coupon Bonds or simply 'Zeroes'. Such bonds are issued at a discount to their face values and are redeemed at par. Thus, the return on these bonds is not in the form of periodic payment of interest but in the form of difference between the issue price and redemption value.

While in rupee terms, the returns may be same for an investor, inherently, Zeroes carry more interest rate risk due to their higher duration than a coupon paying bond of the same maturity.

Such bonds are used by issuers to manage their cash flows as there is no intermittent strain during the life of the bond to make periodic coupon payments. Cash remains within the company and can be used in the business with a slightly longer term horizon. Repayment of the loan would be in one shot as a bullet payment at the maturity of the bond.

Treasury Bills (T-Bills) issued by Government of India, Commercial Papers (CPs) issued by corporates and Certificate of Deposits (CDs) issued by banks and financial institutions are examples of short term zero coupon bonds. These papers are of less than 1 year maturity and hence are also known as Money Market instruments (money market is that segment of Debt market in which papers of less than 1 year are issued and traded).

ZCBs of very long tenure are issued at a steep discount to their face values. Such ZCBs are also known as Deep Discount Bonds. IDBI had issued such bonds many years back. The Kisan Vikas Patra (KVPs) is another example of a deep discount bonds.

Example: Zero Coupon Bond

In October 2009, ETHL Communications Holdings Ltd. (an Essar Group company) raised Rs.4280 crore through an issue of zero coupon bonds. The bonds were launched in two separate series of slightly differing maturities.

Issuer:	ETHL Communications Holdings Ltd
Security:	Zero coupon bond, secured by receivables
Issue Date:	October 2009
Maturity Date:	Series 1 in July 2011, Series 2 in December 2011. Maturity value Rs.100
Issue price:	Series 1- Rs. 85.80 (Implied rate 9.15%)

Series 2- Rs. 82.55 (Implied rate 9.25%)

3.3.2 Floating – Rate Bonds

These are bonds whose coupon is not fixed, as in the case of vanilla bonds, but is reset periodically with reference to a defined benchmark. This could be the inflation index or inter-bank rates or call rates or some other relevant benchmark. Resetting the coupon periodically ensures that these bonds pay interest that reflect current market rates.

Due to their unique nature of constant adjustment of coupon rates, these bonds carry lower interest rate risk or 'price risk'.

Such bonds are especially useful in a rising interest rate scenario as they continuously keep tracking the interest rates prevalent in the market and adjust their coupons periodically, typically every 6 months.

In some cases, there is a maximum and minimum limit to the coupon rates in floating rate bonds and these limits are respectively referred to as 'Cap' and 'Floor'. Housing loans with variable or floating interest rates are an example of this type of loan.

Developed markets also have bonds whose coupons move inversely to the benchmark. These are known as 'inverse floaters'.

3.3.3 Convertible Bonds

A convertible bond or debenture is generally issued as a debt instrument with the option to investors to convert the amount invested into equity of the issuer company later. This security has features of both debt and equity. The issuer specifies the details of the conversion at the time of making the issue itself. These will include:

- The date on or before which the conversion may be made
- The ratio of conversion i.e. the number of shares that the investor will be eligible to get for each debenture
- The price at which the shares will be allotted to the investor on conversion. Usually, this is at a discount to the market price
- The proportion of the debenture that will be converted into equity shares.

These Bonds could be convertible either compulsorily (called compulsory convertible bonds) or optionally (called optionally convertible bonds). Also, these bonds could be fully convertible where the entire face value of the bond is converted into equity shares or partly convertible where a portion of the bond is converted into equity. In partly convertible debentures, non-

convertible portion continues to remain as bonds, earns interest income and gets repaid on redemption.

On conversion of debt into equity, debt is removed from the balance sheet and equity capital is increased. This dilutes the earning per share (EPS) of the stock.

The advantage to the issuer of convertible bonds lies in the fact that convertible bonds usually have a lower coupon rate than pure debt instruments. This is because the yield to the investor in such bonds is not from the coupon alone but also the possibility of capital appreciation in the investment once they are converted into equity. Moreover, the issuer does not have to repay the debt on maturity since shares are issued in lieu of repayment. The disadvantage to this is that stakes of the existing shareholders get diluted when fresh shares are issued on conversion. As more shareholders come in, the proportionate holding of existing shareholders fall.

The investors in a convertible bonds have the advantage of equity and debt features. They earn coupon income in the initial stage, usually when the company's project is in its nascent stage. And, once the bond is converted into shares, they may benefit from the appreciation in the value of the shares.

3.3.4 Amortization Bonds

Bonds usually pay interest during the tenor and the principal is repaid as a bullet payment upon maturity. However, there is a type of bond, known as 'Amortization Bond', in which each payment carries interest and some portion of the principal as well. Housing loans, auto loans and consumer loans are an example of this type of bond, in which every month the borrower pays the same amount (Equated Monthly Instalment – EMI) but each month the composition of this EMI is different with initially interest forming a larger part and later principal forming a larger part.

Suppose a person takes a loan of Rs 100 @ 12% for a period of 12 months. The EMI would be Rs. 8.88; however, in the first month the interest component would be Re. 1 and Principal component would be Rs. 7.88, while in the last month, interest would be only Rs. 0.09, whereas Principal would have increased to Rs. 8.80.

This also explains, why it makes sense to prepay home loans in the earlier stages and not in the later stages.

Loan	100			
Interest	12%			
Months	12			
EMI	8.88			

Month	**EMI**	**Loan**	**Interest**	**Principal**
1	8.88	100	1	7.88
2	8.88	92.12	0.92	7.96
3	8.88	84.15	0.84	8.04
4	8.88	76.11	0.76	8.12
5	8.88	67.98	0.68	8.21
6	8.88	59.78	0.60	8.29
7	8.88	51.49	0.51	8.37
8	8.88	43.12	0.43	8.45
9	8.88	34.67	0.35	8.54
10	8.88	26.13	0.26	8.62
11	8.88	17.51	0.18	8.71
12	8.88	8.80	0.09	8.80

3.3.5 Callable Bonds

Callable bonds allow the issuer to redeem the bonds prior to their original maturity date. In other words, bonds which have embedded call option in them are known as Callable Bonds. This feature poses a risk for investors but is beneficial for the issuers.

An embedded call option gives the issuer the right to call back the bond before maturity. When interest rates fall, the issuer would be in a position to raise the same amount of loan, at a lower interest rate. It is to the advantage of the issuer to redeem the existing high-cost bond before maturity and replace it with a new low cost bond. To compensate for the risk to investors, Callable Bonds usually have high coupons and they are also valued not as per YTM but as per Yield To Call (YTC – which means the markets assume that the bond will compulsorily be called back on the specified call date).

The investor in a callable bond, however, loses the opportunity to stay invested in a high coupon bond, if the call option is exercised by the issuer.

For example, a 10-year bond may be issued with call option at the end of the 5th year such as in the SBI bond illustration below.

SBI Bonds 2011 Series 3	
Issuer	State Bank of India (SBI)
Credit Rating	Care AAA

Face Value	Rs. 10,000
Issue Price	Rs. 10,000
Interest Payment	Annual
Coupon	9.75%
Tenor	10 years
Call Option	SBI has the option to redeem outstanding principal and interest due after 5 years and one day from the date of allotment

3.3.6 Puttable Bonds

A Puttable bond gives the investor the right to seek redemption from the issuer before the original maturity date. These bonds have embedded Put options in them. In this case, the risk is on the issuer, as the investor can, at any point of time give the bond back to the issuer and ask for his principal, earlier than maturity. This would mean cash flow problems for the issuer.

Investors would exercise their right to put the bond back to the issuer when interest rates start rising. They would simply ask for their money earlier than maturity and reinvest that at a higher rate.

For example, a 7-year bond may have a put option at the end of the 5th year. If interest rates have risen, puttable bonds give investors the ability to exit from low-coupon bonds and re-invest money in higher coupon bonds.

3.3.7 Payment in Kind (PIK) Bonds

These are bonds in which the coupon is not paid in cash but by way of more bonds. Companies which have cash flow problems issue such kind of securities and hence by nature these instruments are risky. Also, while temporary cash flow stress is avoided, parallely more loan gets added on the balance sheet, of a company which is already into trouble. Hence, these products are typically for the high risk investors.

3.3.8 Principal – Protected Note (PPN)

PPN is a relatively complex debt product which aims at providing protection of the principle amount invested by investors, if the investment is held to maturity. Typically, a portion of the amount is invested in debt in such a way that it matures to the principal amount on expiry of the term of the note. The remaining portion of the original investment is invested in equity,

derivatives, commodities and other products which have the potential of generating high returns.
Although this is marketed as a debt paper, as it has features similar to fixed income securities, it is a synthetic product constructed by financial engineering – combination of debt and derivative structures.

Risk averse investors get an opportunity to invest in products with a possibility of high returns, while at the same time, their downside is protected in PPNs.

It must be clearly understood that principal protection does not mean absence of credit risk. Investors in PPNs are exposed to the credit risk of issuers. Several Non-Banking Finance Companies (NBFCs) have issued PPNs titled Equity Linked Bonds (ELBs) or Commodity Linked Bonds (CLBs) in the past to raise capital. Some of these structured instruments are listed on Stock Exchanges.

3.3.9 Inflation – Protected Securities

Debt instruments, being fixed income products run the risk of delivering negative real returns during high inflation periods. At times, the investors of debt papers are retired old persons, who do not have other source of income. For such cases, it becomes extremely important to have returns beating inflation.

Inflation Indexed Bonds (IIB) are a category of government securities issued by the RBI which provide inflation protected returns to the investors. In India, Inflation indexed bonds have been launched in which both principal and interest are adjusted for inflation. 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 or inflation adjusted principal is paid out to the investors. 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.

Another category of inflation-indexed instrument issued by the RBI for retail investors is the Inflation-Indexed National Saving Securities-Cumulative 2013. These bonds of 10-year tenor were available to retail resident individuals, minors, HUFs, and charities among others. The bond carries a fixed interest of 1.5% and an inflation rate calculated on the basis of the Consumer Price Index (CPI). The interest is compounded every six months and cumulated and the same is payable with the principal on maturity. The fixed rate of interest is the floor and is

payable even if there is deflation. The interest is taxable according to the tax status of the investors.

Sample Questions

1. **A bond is issued at a face value of Rs. 100 and a coupon of 10% p.a. The interest rates in the market have increased subsequently. This bond is likely to quote at:**
   a. At a price above face value
   b. At the face value
   c. At a price that reflects its credit risk
   d. **At a price below face value**

2. **The _____ of an equity share is the discounted value of its future benefits to the investors.**
   a. **Intrinsic Value**
   b. Replacement value
   c. Market value
   d. Face Value

3. **Calculate the Enterprise Value based on the given information: Market Capitalisation = 10 lakhs; Total Debt= 3 lakhs; Cash = 4 lakhs.**
   a. 11 lakhs
   b. **9 lakhs**
   c. 13 lakhs
   d. 6 lakhs

4. **Bonds which have embedded call option in them are known as Callable Bonds. State whether True or False.**
   a. **True**
   b. False

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CHAPTER 4: FUNDAMENTALS OF RESEARCH

LEARNING OBJECTIVES:

After studying this chapter, you should know about:

- Key aspects before investing in securities
- Overview of the Fundamental Analysis for investing in stocks
- Overview of Technical Analysis for investing in stocks
- Behavioral Finance approach to investing in securities

4.1 What is Investing?

Benjamin Graham in his book "*The Intelligent Investor*" defines investment activity in the following words:

"An investment operation is one which, upon thorough analysis promises safety of principal and an adequate return. Operations not meeting these requirements are speculative."

These words of wisdom on investing by Mr. Graham are unique and have significant communication in bites as follows:

Investment Operation - Investing requires adequate efforts in terms of research and understanding the investment options available, determining their suitability for the needs of the investors and their appropriate value. Investing is not a one-time activity, but one that requires regular tracking, monitoring and suitable changes to the investment decisions based on new set of information and understanding. The activities associated with investments must be undertaken in a disciplined and systematic way. Mr. Warren Buffett also stated "Investing is most intelligent when it is business like."

Thorough Analysis - Buying shares of a company is equivalent to taking part ownership in a business. Indeed, buying a business (fully or partly) is alternative to starting a business and would demand same kind of research and analysis as would be required when considering to start a business on various dimensions of the business – product, customers, inputs, outputs, bargaining power of business vis-a-vis other external parties such as suppliers, customers and others, competition, regulatory environment, potential opportunities, threats.

Safety of Investment - Graham says that first objective in investing has to be to protect the investment value for which it is important to identify opportunities that provide a margin of safety (MOS). In investments, this means investing in opportunities available at prices lower

than their perceived value. Backed by strong research and monitoring, an investment portfolio should be able to protect the investor's investment value over a suitable investment horizon, despite short-term fluctuations in the market.

Adequate return - While meaning of adequate is not defined by Graham, it would probably mean risk adjusted return in comparison to other competing avenues for invested capital. It is important to understand the risk and return features of an investment before committing to it.

Investors that follow the above tenets are said to be engaged in investing. Following are the learnings for common investors from this definition of investing.

Difference between investing and speculating - There is an unambiguous demarcation between investing and trading. Investing money without going through the rigor of understanding and analyzing the investment options, their risk and return features and appropriate value would be like taking a bet or speculating rather than investing. Such activity has a greater chance of losing rather than making money for the investors. Speculation is typically short-term calls made with leveraged funds, unlike investing money which is a long-term disciplined activity for creating wealth.

Align Investment to Needs - A good investment option available at a reasonable price may still not be suitable for an investor if it does not meet his investment needs. Investment needs can be primarily defined in terms of the nature of return required, the risk that the investor is willing to take and the investment horizon. For example, investing in a well-researched growth stock may not be suitable for a retired investor looking for regular income from his investments.

Investing demands hard work - The activities involved in investing require a large commitment of time and efforts, along with the skills and understanding to collect relevant data, analyze the investment options, execute the decisions and monitor the investments made. Most investors may find that they fall short on these requirements. Making investment decisions without the necessary skills would mean that the investor's money is not being deployed in the best way possible.

Become a skilled investor or hire someone to manage money - The investors can either develop the skills required to make and manage their investments or find someone with the qualification who they can trust to do so. Investors should never forget to do due diligence (research) on the money manager. They should focus on aspects such as qualification, experience, performance track record, systems and support facilities, integrity, philosophy of investing and other relevant factors of the money managers.

4.2 Research on Businesses or Stocks

As stated above, investing is taking part ownership in the business. A commitment should be made only after adequate research has established the viability of the business proposition and the attractiveness of the price at which it is available.

While the objective of analysis is primarily to determine which businesses to buy and at what price, there are two basic approaches to the subject- Fundamental Analysis and Technical Analysis.

4.3 Fundamental Analysis

Theoretically, the fair value of a bond or an equity share is the sum of the discounted value of the expected future cash flows. The valuation is simpler in a bond, because the cash flows are predefined and end at a given point in time. Equity earnings are not pre-defined and equity is a perpetual investment with no pre-set maturity date. The focus in equity valuation is on the future earnings and the estimates of growth in earnings.

Fundamental analysts maintain that market may misprice securities in the short run but in the long run, prices would merge with the securities' fair value or intrinsic value. Therefore, profits in investments come from not only identifying a good investment option but also making the investment at the right price. This thought process is in contradiction of Efficient Market Hypothesis (EMH), which propagates that share prices incorporate and reflect all relevant information.

Fundamental analysis considers both qualitative and quantitative dimensions of a business. While financials will reveal history of the business and the financial readiness to grow in the future, evaluating factors such as the economic conditions favourable to the business, the ability of the management to identify and exploit opportunities, the operating efficiencies that the business possesses and the risks that may affect the plans and its ability to meet these contingencies, will define the attractiveness of the business as an investment proposition. Accordingly, fundamental analysis includes following:

1. Economic analysis
2. Industry analysis
3. Company analysis

Fundamental analysis may be triggered by changing macro-economic factors, both international and national, such as GDP growth rates, inflation, interest rates, exchange rates, productivity,

prices of commodities, regulatory aspects and others. This can lead to an analysis of their impact on different industries and then to search to the best businesses in the industry. This is called **top-down approach** to fundamental research. For example, the regulatory uncertainty regarding spectrum auction in the telecom sector in India would trigger a re-look at the industry's prospects and its impact on the different companies in the sector.

However, sometimes analysis is triggered by some news or piece of information on some company, which may move to industry analysis and then economic analysis to see whether broad industry and economic parameters favour the company. This is called **bottom-up approach** to fundamental research.

Indeed, sometimes, bottom-up analysts focus purely on dynamics of business and industry with little or no attention to the Economic factors as their focus remains on buying and holding fundamentally strong businesses which would probably do well across the economic cycles, such as pharmaceuticals, consumer goods and other such businesses.

4.4 Technical Analysis

Technical analysis is based on the assumption that all information that can affect the performance of a stock, company fundamentals, economic factors and market sentiments, is reflected already in its stock prices. Accordingly, technical analysts do not care to analyze the fundamentals of the business. Instead, the approach is to forecast the direction of prices through the study of patterns in historical market data - price and volume. Technicians (sometimes called chartists) believe that market activity will generate indicators in price trends that can be used to forecast the direction and magnitude of stock price movements in future.

There are three essential elements in understanding price behaviour:

1. The history of past prices provides indications of the underlying trend and its direction.
2. The volume of trading that accompanies price movements provides important inputs on the underlying strength of the trend.
3. 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.

Technical Analysis is a specialized stream in itself and involves study of various trends - upwards, downwards or sideways, so that traders can benefit by trading in line with the trend. Identifying support and resistance levels, which represent points at which there is a lot of buying and selling interest respectively, and the implications on the price if a support and resistance level is broken, are important conclusions that are drawn from past price movements. For example, if a stock price is moving closer to an established resistance level, a holder of the stock can benefit by booking profits at this stage since the prices are likely to retract once it is close to the resistance level. If a support or resistance is broken, accompanies by strong volumes, it may indicate that the trend has accelerated and supply and demand situation has changed. Trading volumes are important parameters to confirm a trend. An upward or downward trend should be accompanied by strong volumes. If a trend is not supported by volumes or the volumes decrease, it may indicate a weakness in the trend.

Technical analysis converts the price and volume data into charts that represent the stock price movements over a period of time. Some of the charts used include line charts, bar charts, candlestick chart. The patterns thrown up by the charts are used to identify trends, reversal of trends and triggers for buying or selling a stock. Typically, chartists use moving average of the price of the stock to reduce the impact of day to day fluctuations in prices that may make it difficult to identify the trend.

Unlike fundamental analysis, technical analysis is not concerned if the stock is trading at a fair price relative to its intrinsic value. It limits itself to the future movements in prices as indicated by the historic data. It is used for short-term term trading activities and not necessarily long-term investing.

4.5 Behavioral Finance

Investment 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. Thinking behind proponents of this philosophy is that securities prices go away from their fair values either upside or downside because of the fear and greed of the market participants. Some of the well documented behavioural biases that are observed in decision making influencing investments are discussed in detail in Chapter 11.

Sample Questions

1. **Speculation is _____ calls made with leveraged funds, unlike investing money which is a _____ disciplined activity for creating wealth.**
   a. **Short Term; Long term**
   b. Long term; medium term
   c. Long term; Short term
   d. Long term; Long term

2. **Fundamental analysis includes which of the following?**
   a. Economic Analysis
   b. Industry Analysis
   c. Company Analysis
   d. **All of the Above**

3. **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. State whether True or False.**
   a. **True**
   b. False

4. **In technical analysis, impact of day to day fluctuations in prices is annulled by which of the following factors?**
   a. Increasing Time Period of price charts
   b. Using liquidity parameter along with prices
   c. **Using Moving Averages**
   d. None of the above

CHAPTER 5: ECONOMIC ANALYSIS

LEARNING OBJECTIVES:

After studying this chapter, you should know about:

- Principles of Microeconomics and Macroeconomics
- Key economic variables for carrying out fundamental analysis
- Sources of Information/data of economic variable for carrying out economic analysis

Economics is the study of how people make choices under conditions of scarcity and the impact of those choices for people at an individual level and society at macro level. Economic analysis of human behaviour begins with the assumption that people are rational - they have well-defined goals and try to achieve them as best they can. In trying to achieve their goals, people normally face trade-offs: resources both material and human are limited and making one choice would generally mean letting go of something else. It requires prioritization of needs and wants and allocation of limited resources to the desired goals.

Although there are several branches of economic study, microeconomics and macroeconomics are the most well-known. As their names indicate, microeconomics is the study of economics on a smaller (micro), more detailed scale and macroeconomics is the study of economics on a larger (macro), broader scale.

5.1 Basic Principles of Microeconomics

As stated above, Microeconomics is the study of the behaviour of individuals and their decisions on what to buy and consume based on prevalent prices which in turn signals where the economy has to direct its productive activities. The philosophy of Microeconomics is that prices and production levels of goods and services in an economy are driven by consumer demand. Accordingly, Microeconomics focuses on the drivers of decision making, as well as the ways in which individuals' decisions affect the overall supply and demand and supply of particular goods and services, in an economy, and in turn their prices.

Microeconomics also deals with the "theory of the firm." Extending the concept of individuals, here it deals with how firms adopt different strategies to increase their profits. It deals with the decision making process at the level of inputs, outputs, prices, production levels, profits and losses of individual firms.

The importance and uses of microeconomics in brief are as under:

1. Microeconomics deals with the understanding and working of a free market economy.
2. Microeconomics helps us understand how the prices of the products and services get determined in an economy, how individuals and firm behave with regard to those prices and how goods and services in an economy are distributed among its various participants.

5.2 Basic Principles of Macroeconomics

As stated before, macroeconomics is the study of "the big picture" in the economy. While microeconomics focuses on individual households and firms, macroeconomics deals with the economy as a whole. In other words, the focus of macroeconomics is on factors that influence aggregate supply and demand in an economy such as unemployment rates, gross domestic product (GDP), overall price levels, inflation, savings rate, investment rate etc. Most of these factors are highly affected by changes in the public policies.

Two major influencers of the public policies in an economy are the government and the central bank. Decisions of the government, known collectively as fiscal policy and actions of the central bank, known collectively as monetary policy, affect the overall economy activity to a large extent. The late John Maynard Keynes laid great emphasis on macroeconomic analysis. His work, captured in the book - “General Theory of Employment, Interest and Money”, is quite revolutionary and brought drastic changes in economic thinking.

The importance and uses of macroeconomics in brief are as under:

1. Macroeconomics helps us understand the general state of the economy – Domestic Production, Domestic Consumption, General Price levels, Growth, Quality of life etc.
2. Macroeconomics helps us understand drivers of income, savings, investments and employment in an economy.
3. Macroeconomic models help governments and central bankers formulate economic policies for achieving long run economic growth with stability.
4. Macroeconomics helps us understand various aspects of international trade of goods and services - exports, imports, balance of payment, exchange rate dynamics etc.
5. Macroeconomics also facilitates understanding on how inter-linkages across the economies work.

5.3 Introduction to Various Macroeconomic Variables

The government and central banker, in any economy, as policy makers strive to promote economic stability and growth. Their continuous attempt is to implement policies, which ensure low unemployment rate, price stability with low inflation rate and steady growth in economic outputs. However, in spite of the best intentions and efforts of policy makers, economies go through the cycles of booms and busts.

There are multiple variables that influence an outcome and it may not be possible to control all of them. For example, the RBI's attempt to tame the high inflation in India in 2011, 2012 and 2013 by increasing interest rates, which is the standard policy action to reduce inflation, did not get the desired results because food prices remained high. Policy makers, in different countries, may take different routes to arrive at the same common goal, depending upon the economic conditions prevalent there.

Economics is a vast subject and needs elaborated explanations for each term. However, given the scope of this workbook, it may not be possible to deal with the subject in great detail. While various macroeconomic variables are defined below in few lines as definitions, readers interested in understanding the subject in great details have to rely on other relevant books/material and literature on the subject.

5.3.1 National Income

National income of an economy is defined through a variety of measures such as gross domestic product (GDP) and gross national product (GNP). Computation of these numbers is a humongous task in terms of data-collection and its processing. Broadly stating, national income of an economy can be measured through three methods: (i) Product Method (ii) Income Method, and (iii) Expenditure Method.

Product Method

In this method, national income is measured as an aggregated flow of goods and services in the economy from the different sectors: agriculture, industry and services. Economists calculate money value of all final goods and services produced in the economy during a specified period. Final goods refer to only those goods which are consumed by economy participants and not the ones used in further production processes (intermediate goods).

Product method deals with the economy sector-wise. The total output in the economy is computed as the sum of the outputs of various sectors.

Income Method

In this method, national income is measured as the aggregate income of individuals in the economy. Robert Kiyosaki, an author and businessman, divides the whole working population in the world in four broad categories – Employees (labour and other employees), Professionals, Entrepreneurs and Investors. Employees earn wages and salaries, Professionals earn their income based on their services, Entrepreneurs earn profits (including undistributed corporate profits) and Investors earn return on their capital and rent on their land. Sum of all these incomes for a specified period is called National Income for the economy.

Expenditure Method

As all the goods and services produced in an economy are bought (consumed) by someone, National Income may also be calculated from the consumption end. Expenditure method attempts to undertake the same philosophy while computing the National Income. Consumers in an economy are broadly divided into three categories – individuals, corporates and government.

Further, as an economy would also have exports (people of foreign countries spending on goods and services produced by an economy) and imports (people of an economy spending on goods and services produced by other economies), necessary adjustments are made for the same by the economist while arriving at the National Income through this method. The aggregate demand for goods and services is computed as the sum of private consumption, government spending, gross capital formation and net exports.

In practice, all three counting methods produce similar results with minor differences for several reasons including errors in the statistics.

National Income is one of the most important statistics for a country. Following are some of the uses of national income statistics:

Level of Economic Welfare and growth - National Income reveals the overall performance of the country during a given financial year. With help of this statistics, per capita income (National Income/total population) i.e. the average income earned by each individual in the economy is calculated. Per Capita Income (not the National Income) is better measure of standard of living in a country, because, while National Income may increase, faster increase in population may reduce the per capita income; which means standard of living in the country has gone down. Higher the per capita income, higher the standard of living in the country.

Looking at the national income statistics over several years, we can know whether an economy is growing or declining.

Distribution of income among constituents of the economy - Income method of National Income computation helps us understand how the National Income is distributed among the various constituents in the economy - Employees, Professionals, Entrepreneurs and Investors. The product method identifies which sector is the primary contributor to the country's GDP and the rate of growth of different sectors in the economy. For example, the service sector constitutes 60% of India's GDP at factor cost.

Support to Fiscal and Monetary policies - Statistics such as saving, consumption and investment in the economy help policy makers in taking required measures to accomplish desired goals. In other words, National Income computation proves to be a valuable guide to policy makers.

5.3.2 Savings and Investments

As defined above, there are three constituents in an economy - Individuals, Corporates and Government. Savings, defined as income over expenses, are computed for all three categories separately. Savings of individuals is called "personal savings", savings of corporates (undistributed profits) is called "corporate savings" and savings of government is called public savings (rarely there; governments generally run budget deficits). Individuals and corporate entities may be clubbed together as private savings. Economists arrive at National Saving by summing savings of these three constituents - personal, corporate and public savings.

It is also important to understand that savings does not mean investment. Savings are to be channelized towards productive venues called investments – given to corporates or government to invest to generate further earnings. When savings are turned into investments, they take the shape of some financial instrument – Equity, Bonds, Government Securities and others to transfer the funds from the savers to users (issuers of securities) who are expected to employ these savings to productive activities. Government and Central Bankers continuously focus on facilitating the conversion of savings into investments through creation of efficient and effective Financial Markets – wide range of products, ease of conversion, simplicity in transactions, safety in dealing, low cost and transparency in operations.

Higher levels of savings and higher conversion of those savings in to investments are considered good for an economy.

5.3.3 Inflation (Consumer/Wholesale Price Indices) and Interest Rate

Often people are heard saying that “things have become very expensive over a period of time”. How do things become expensive? What explains the rise in the price of general goods and services? Answer to that question is “Inflation”.

Inflation is defined as the general increase in price levels of goods and services in the economy leading to an erosion of purchasing power of money. If Rs. 1000 was put away in a drawer, what would happen to the money after a year? Yes! It would be the same Rs. 1000 bill after a year, but it would buy lesser goods and services than what it would have fetched a year back as all goods and services would have become more expensive after a year. How much less Rs. 1000 would buy today in comparison to that of last year is a function of how expensive goods and services would have become over the period, which in turn is a function of prevailing inflation rate in the economy.

Inflation can be caused by demand pull factors or cost push factors. An increase in the price of goods and services because demand being in excess of available supply, is called demand pull inflation. An increase in prices because of an increase in input costs is called cost-push inflation. To defuse the inflation, policy makers adopt several measures to reduce the demand or increase the supply or both.

Generally, inflation is measured in two ways - at wholesale level in terms of Wholesale Price Index (WPI) and retail level in terms of Consumer Price Index (CPI). Typically, economists define a basket of products based on general consumption in the economy and compute its prices based on wholesale prices and retail prices defining WPI and CPI respectively. Statistics on WPI and CPI over several years provides trend in inflation numbers and feeds as important input for policy measures by both government and central banker.

Further, interest and inflation are closely linked parameters. Higher inflation demands higher rates for people to get motivated to save. As they save more and consume less, consumption goes down. On the other hand, higher rates reduce the investments (high cost of capital) and may slow down the overall economy. Higher rates affect some sectors such as real estate and auto more intensely as of most the buying here by the middle class people happens through loans, which become expensive in higher rates scenario. Higher inflation reduces the discretionary income that people have and impacts their demand for products and services across the board.

5.3.4 Unemployment Rate

Unemployment rate refers to the eligible and willing to work unemployed population of the country in percentage terms. During a slowdown in economies, unemployment rate rises and during an expansion phase, the unemployment rate falls as more jobs are created as production goes up. Higher employment means income, which improves the ability of people to spend, which implies potential growth in the economy. The reverse would be true for economy going through tough times and high unemployment rates.

5.3.5 Flows from Foreign Direct Investment (FDI) and Foreign Portfolio Investments (FPI)

Foreign capital flows to a country can be either in active form known as Foreign Direct Investment (FDI) or passive form known as Foreign Portfolio Investment (FPI). In case of FDIs, investing entities participate in decision making and drive the businesses. However, Portfolio Investment, as name indicates is investment in markets – equity or bonds by the Foreign Portfolio Investors (FPIs) without any management participation. There are upper limits on the individual and combined holding by FPIs in the paid up capital of the Indian companies.

FDI is welcomed by all the developing economies and has multiple benefits in addition to bring in capital to the country:

- Job creation
- New technologies
- New managerial skills
- New products and services

While FDI is long term in nature and stable money, FPIs money is considered as hot money as they can pull out the money at any time which could create systemic risk for the economy.

5.3.6 Fiscal Policies and their Impact on Economy

Fiscal policy contains the measures of the Government which deal with its revenues and expenses. Fiscal measures are important in any economy because when government changes the measures of its income (primary source being taxation) and expenditure (education, healthcare, police, military forces, interest on borrowing, administrative machinery, welfare benefits etc.), it influences aggregate demand, supply, savings, investment and the overall economic activity in the country.

Budgeted excess of Government's expenditure over its revenues in a specific year is known as fiscal deficit, which is generally defined as a percentage of GDP. The fiscal deficit is bridged by the government through market borrowings, both short-term and long term. A large fiscal

deficit, and consequently a higher borrowing by the government, will push up interest rates in the economy and make it difficult for corporate borrowers to access funds. A high interest rate environment is detrimental to economic growth.

A country has trade and other contracts with entities abroad which results in receipts and payment of funds. These include payments for imports and receipts for exports, interest and dividend received and paid and other transfers from abroad. The current account balance is the difference between the receipts and the payments. A country may have a current account surplus (receipts > payments) or deficit (receipts<payments). A high fiscal deficit in proportion to the GDP caused by lack of competitiveness in trade or excessive consumption is a negative commentary on the economy. A high CAD causes the nation's currency to weaken relative to other currency. This makes imports more expensive and will affect the productivity of the economy as capital goods and commodities become expensive. It reduces the credit worthiness of the nation and makes borrowings more expensive. A depreciating currency makes exports of the nation more competitive and may help narrow the deficit. If the country is seen as an attractive investment destination, the capital inflows in the form of FDI and portfolio inflows will offset the CAD and protect the currency from devaluation.

Expenditure is funded by the Government through multiple ways, mainly through:

P/L measures - Income from operations: Taxation, interest and dividend income

B/S measures - Borrowing and Sale of assets

While Government tries to balance between its inflows and outflows, based on its actions, fiscal policy is being categorized as:

Neutral fiscal policy – When governments' income and expenditure are in equilibrium. No major changes required in the Fiscal policies.

Expansionary fiscal policy – Fiscal measures when government's spending exceeds its income. This policy stance is usually undertaken during recessions/slow moving economy.

Contractionary fiscal policy – Fiscal measures when government's spending is lower than its income. Government uses excess income to repay its debts/obligations or acquire assets.

5.3.7 General Anti-Avoidance Rules (GAAR)

Entities in an economy adopt various methods to reduce their tax liabilities and the same may be categorized as: "Tax Evasion", "Tax avoidance", "Tax Mitigation" and "Tax Planning". General Anti-Avoidance Rules (GAAR) are framed to minimize tax avoidance. Simple example of tax

avoidance is routing of investments by investors through tax havens such as Mauritius. In India, these rules were proposed by the Union Budget 2012-2013. Initially, GAAR was to be effective from April 1, 2014, which was subsequently deferred to April 1, 2015 (FY 2015-16) and now to investments made on or after April 1, 2017. It will apply if the main purpose of the transaction was to get tax benefits. Investments made before 30th August 2010 are not to be covered under the rules and investments made under an FII structure in listed securities will not be covered. GAAR will not apply if the tax benefit is below Rs. 30 million.

General Anti-Avoidance Rules empower the revenue authorities in a country to deny the tax benefits to the entities on a transaction, which is primarily carried out in a specific manner to avoid taxes. GAAR provides discretionary powers to revenue authorities to impose taxes on such transactions.

5.3.8 Monetary Policies and their Impact on Economy

Monetary policies, administered by central bank in an economy, deal with money supply, inflation, interest rates for the purpose of promoting economic growth and managing price stability (inflation). Monetary policy, similar to Fiscal policy, is referred to as either being expansionary or contractionary depending on policy stance. Expansionary monetary policy is used to push the economy up by increasing the money supply steeply and reduction in the interest rates. On the other hand, Contractionary policy is intended to cool down the heated up economy through reduction in the money supply or slow increase in money supply and increase in the interest rates.

Central banker controls the money supply and interest rates with tools such as Repo rate (rate at which the central bank lends money to commercial banks), Reverse repo rate (rate at which the central bank borrows money from commercial banks), Cash Reserve Ratio (minimum percentage of the total deposits, which commercial banks have to hold as cash reserves with the central bank) and Statutory liquidity ratio (SLR) (minimum percentage of the total deposits, which commercial banks have to hold in cash equivalents such as gold and government of India securities).

There is no sure shot formula to handle economic issues such as slowing down in growth, inflation, exchange rate management and others. Given the variations in the composition of the GDP, growth rate, demographic features of different economies, the same policy action may have different outcomes in different economies. Moreover, a policy action taken to correct one economic problem may have unintended consequences and create a fresh probe. For example, stimulating a stagnant economy by increasing money supply, increasing spending and/or lowering taxes runs the risk of causing inflation to rise. On the other hand, when economy is

heated up, it may need fiscal measures to slowdown. In such a situation, a government can increase taxes to suck money out of the economy or decrease in its spending thereby decreasing the money in circulation. However, possible negative effects of such a policy in the long run could be a slow moving economy and high unemployment levels.

5.3.9 International Trade, Exchange Rate and Trade Deficit

International trade refers to the total trade that a country does with all other countries in the world. A country's balance of payment is the statement showing transactions of a country with the rest of the world. Balance of payment statement is broadly divided into two accounts namely the current account and the capital account. The current account has all the details of transactions on revenue account viz. imports and exports of goods and services while the capital account captures all the capital flows like FDI, FII, loans, and grants etc.

If imports are more than exports, then country will have a current account deficit and if exports are more than imports then it will have current account surplus. Similarly, capital account will be in surplus if inflows are more than outflows and in deficit if outflows are more than inflows on capital account. Surplus and/or deficit on both current and capital accounts put together makes it balance of payment number for a country.

If a country is running continuous deficit on current account, it would need surplus on capital account to support that or deplete its foreign currency reserves. In both these situations, the country runs the risk of losing confidence of market participants in the country as the currency of the country would lose value very fast.

Currencies get traded in the world markets like commodities. Exchange rate refers to the value of one unit of a currency with respect to other currency/currencies. For example, if Indian Rupee is quoted against the dollar as $/Rs. 65, it means one dollar is priced at Rs. 65. Currencies can become more expensive and/or lose their value vis a vis other currencies based on the relative strength of the countries' economy.

5.3.10 Globalization – Positives and Negatives

Globalization, simply stating, is the ability of the individuals and firms to produce anything anywhere and sell anything anywhere across the world. It also means that resources (people and capital) will flow to the places where they produce best and earn best.

World is becoming flatter with less and less entry barriers with an objective to optimize the output of resources. Economies are realizing that protective attitude would not take them long and they need to open up economies to the world to progress and allocate resource to the

maximum output. Accordingly, many countries including the developing ones have embraced globalization by opening up their economies. However, there is no compulsion for any economy to do so each country decides on the subject on its own based on its assessment of the perceived advantages.

Globalization is good or bad for economies has always been a debatable issue. Here is a big picture on positives and negatives of globalization:

Positives of Globalization:

- Best allocation of global resources as they are able to flow where they produce best and earn best.
- Integration of developing economies with the developed world and opportunities for them to learn and grow, access new products and services, exposure to new technologies etc.
- Benefits to end consumers through global competition, which encourages creativity and innovation and keeps prices for goods and services under check.
- Greater access to foreign culture in the form of art, movies, music, food, clothing etc. In other words, the world has more choices today.

Negative of Globalization:

- Increasing divide between the rich and the poor - the rich are getting richer and the poor are becoming poorer.
- Competition results in survival of the fittest. As jobs can move to the most competitive countries, countries with less competent talent may be left without opportunities.
- Integrated economies mean that problem in one part of the world would affect the other parts of the world. For example, credit crisis in U.S. in 2008 created havoc across the world.

5.4 Sources of Information for Economic Analysis

There are several sources of information on economy and a few prominent among them are:

- Government Websites
- Websites of Regulators such as SEBI, RBI, MOF etc.
- Published Economic Research Reports
- Economic Survey

Sample Questions

1. **Focus of microeconomics is on factors that influence aggregate supply and demand in an economy such as unemployment rates, gross domestic product (GDP), overall price levels, inflation, savings rate, investment rate etc. State whether True or False.**
   a. True
   b. False

2. **Two major influencers of the public policies in an economy are _____ & _____.**
   a. Government ; Central Bank
   b. Stock Exchanges; Government
   c. Central Bank; Stock Exchanges
   d. State Bank of India; National Stock Exchange

3. **National income of an economy can be measured through which of the following methods?**
   a. Product Method
   b. Income Method
   c. Expenditure Method
   d. All of the above

4. **The fiscal deficit is bridged by the government through market borrowings, both short-term and long term. State whether True or False.**
   a. True
   b. False

CHAPTER 6: INDUSTRY ANALYSIS

LEARNING OBJECTIVES:

After studying this chapter, you should know about:

- Michael Porter's Five Force Model
- PESTLE Analysis
- Boston Consulting Group Analysis
- Structure Conduct Performance Analysis
- Key Industry drives and the sources of information for industry analysis
- Regulatory Framework
- Sources of Information/data of variables for carrying out industry analysis

6.1 Michael Porter's Five Force Model for Industry Analysis

Analyzing any industry requires looking at it from various angles and finally reaching to a conclusion about its attractiveness as an investment proposition. Market participants use different methods to make this analysis. Among the many methods used for doing such an analysis is the popular Porter's 5 Forces model developed by Dr. Michael Porter in 1979.

As the name suggests, this model analyses any industry on the basis of five broad parameters or forces. These 5 forces are divided into 2 vertical and 3 horizontal ones, as listed below:

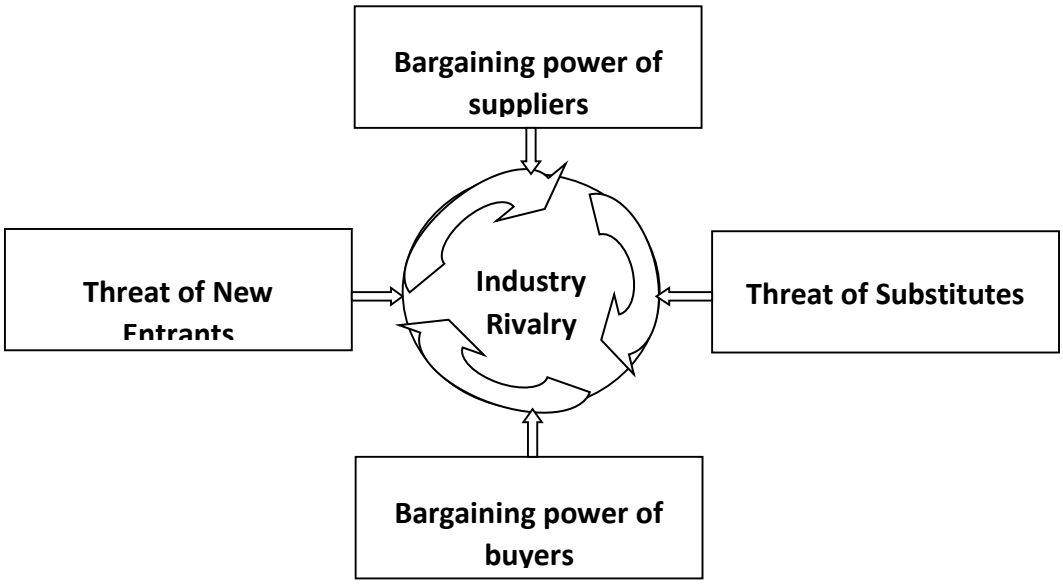
Horizontal Forces:

1. Threat of Substitutes
2. Threat of New Entrants
3. Threat of Established Rivals

Vertical Forces:

1. Bargaining Power of Suppliers
2. Bargaining Power of Customers

The below picture captures the essence of Porter's Five Forces Model:



Some industries have structure wherein these forces make it very difficult for the businesses to earn significant profits for the owners. For example, either or all or a combination of some of these forces in industries like aviation, telecom, retail, textile, sugar, power, etc. end up keeping profits low for companies in these sectors. Such sectors are termed as unattractive ones by the model from owners' perspective. On the other hand, industries like Education, FMCG, Healthcare and IT enjoy huge margins over long periods of time as the forces are not so strong there. Such sectors are termed as attractive by the model for shareholders.

Two of Warren Buffet's quotes in the context of industry structure are pertinent here:

1. When a management with a reputation for brilliance tackles a business with a reputation for bad economics, it is the reputation of the business that remains intact.
2. Should you find yourself in a chronically leaking boat, energy devoted to changing vessels is likely to be more productive than energy devoted to patching leaks.

Mr. Buffet, through these two quotes, is clearly indicating that if economics of business is bad, a great management may not be able to bring anything substantial and an investor would be better off shifting his investments to different industry.

Now, let us look at each of these five forces of Dr. Porter's model in detail:

6.1.1 Industry Rivalry

An industry where rivalry is high, like the aviation and telecom space, the end result will be lower pricing power and lower incomes for the industry participants. Innovation in products

and customer service and engagement initiatives become essential in such an industry. A strong competitor with deep pockets can easily adopt the tactics such as continuously dumping products/services at prices lower than the cost to drive others out of the industry. Not everyone can sustain losses for long period. Intensity of rivalry can be understood from following simple industry characteristics. It would be high if:

1. Many companies exist in the business segment
2. Similar products/services being offered by participants with little or no differentiation
3. Every industry participant tries to attract customers with similar strategies – lower prices or longer credits
4. Switching cost for customers from one product/service to another is low or nil

If industry rivalry is strong, businesses in the industry will go through frequent phases of low revenues and profitability. The telecom industry in India is a case to point where a number of players in each telecom circle try to garner market share by offering competitive plans. The high pre-paid component in the revenue of all telecom players means that the price sensitive subscribers would easily migrate to lower priced offerings of competitors. It is relevant to quote Mr. Charlie Munger, partner at Berkshire Hathaway here *"If only basis of competition in an industry is pricing, it is a self-defeating business."*

So, how can a company, in a competition intensive industry still deliver good returns to its shareholders? Answer lies in aggressive innovation internally as well as externally. Better and efficient operations resulting in lesser working capital requirement, faster turnaround times, lesser cost of capital are some of the things which the company has to do internally. On the external side, launching differentiating products, creating and nurturing strong brands, positioning its products/ services uniquely are what the company can do to breakout of the clutter. For example, Micromax, a cellular device company in India, managed to garner a 10% market share in just three years of launch by focusing on special features at competitive prices.

6.1.2 Threat of Substitutes

Industries go through significant changes from time to time. Telegram does not exist anymore as Short Messaging Service (SMS) emerged as cheaper and easier alternative with significant accessibility. Cement pipes industry lost its relevance to steel and plastic pipes. Typewriters got substituted by computers totally. IPods, mobiles etc. have rendered radio and two-in-ones a thing of the past. The most famous example is of the how digital photography completely destroyed the film-based model followed by Kodak. While first digital camera was invented by Kodak engineers, to protect their existing business, the company did not move to that. As innovations happen, existing products become irrelevant. This is called threat of substitutes.

The ability of an industry and company to foresee changes and to adapt to them early, will define their success. Unfortunately, Kodak did not see the threat, and subsequently filed for bankruptcy.

Some industries are not able to face the threat of substitutes and fail, while others reinvent themselves to stay relevant. Also, some industries do not have threat of substitutes at all. For example, power, healthcare, education etc. There could be different modes of servicing customers at different times but these products/services will never be out of business.

Threat of substitutes can be understood from following two simple industry characteristics. It would be high if:

1. Substitutes offer equal or better experience to customers – quality, price, ease etc.
2. Switching cost for customers from one product/service to another is low or nil

Sometimes, substitutes may take long time to replace the existing businesses. For example, solar products, while are cheaper at operating level, need capex to begin with and that becomes deterrent for customers. So is the case with LED lights. As technology evolves and new products become cheaper, more and more customers shift to them posing higher threat to the existence of traditional businesses.

6.1.3 Bargaining Power of Buyers

Buyers can exert a lot of pressure and dictate prices, if there are a large number of sellers with similar products/services. On the contrary, they may not be such a big influencer in case there are few sellers for a product/service. In nutshell, it is the function of number of buyers and sellers and differentiation in their products/services, which may determine buyers' bargaining power in an industry. The size and profile of the buyer, for example, the government as a buyer of the product or service, can influence the bargaining power they have.

Buyers' bargaining power can be understood from following simple industry characteristics. It would be high if:

1. Competitive intensity in the industry is strong (continuous pricing pressure would exist on industry participants).
2. Products/Services are standardized with little or no differentiation.
3. Close substitutes of the products/services exist and switching cost for customers is low or nil.

6.1.4 Bargaining Power of Suppliers

A consumer will rarely bargain over the fees charged by hospitals or schools? But, the same consumer will bargain with the vegetable or fruits vender all the time. In the first case, the bargaining power of suppliers is absolute and in the second case, bargaining power of suppliers is nil (until he/she is the only vendor and close substitute is pretty far).

The sugar industry, especially in the Indian context, is totally dependent upon the price which is decided by the government after considering the views of the sugarcane farmers. So the input cost of the raw material depends upon the price which the suppliers demand. In this case, suppliers have a strong bargaining power. Similarly, supplies of the essential commodity, crude oil is virtually controlled by a few Organization of the Petroleum Exporting Countries (OPEC) through adjustment of the outputs to maintain the price levels, they desire. In a sense, we may say OPEC has pricing power on oil.

Suppliers' bargaining power can be understood from following simple industry characteristics. It would be high if:

1. The number of suppliers are limited and buyers are many
2. Suppliers supply some critical inputs to buyers
3. Competitive intensity in the industry is low with differentiation in products and services.
4. Products/services do not have threat of substitutes
5. Switching cost for the customers is high

6.1.5 Barriers to entry (Threat of new entrants)

An industry which does not face the threat of new competitors coming in would be an attractive industry for investors/owners. There could be several barriers to entry for new entrants in a business - licensing, required competence/skills (IT products), capital (oil and gas), distribution reach (banking and finance), brand loyalty of customers with the existing participants (toothpaste, coffee markets) etc. etc. This is what Warren Buffet calls as 'the moat'; he says "In business, I look for economic castles protected by unbreachable 'moats'." This essentially means he looks for businesses with high entry barriers. Such businesses will have pricing power viz. can sell the products at a premium without fear of losing customers.

Entry barriers in an industry can be understood from following simple industry characteristics. They would be high if:

1. There are lots of licensing required in the business
2. Patents and copyrights prevent new entrants

3. Huge investments in specialized assets pose a challenge
4. Strong Brands, strong distribution network, specialized execution capabilities, customers loyalty with existing products/services exist in the business

Based on the above discussion, attractive Industry from shareholders' perspective is one that has one or more the following salient features that create a profitable atmosphere for the business:

1. Low competition
2. High barriers to entry
3. Weak suppliers' bargaining power
4. Weak buyers' bargaining power
5. Few substitutes

If an industry is having these features, it would have strong pricing power and high profit margins and attract investors. For example, Education is an industry in India where there is ample demand (and continuously increasing) and very little bargaining power of the students (buyers of the service). The industry is by and large protected from recession. Starting an educational institute requires multiple permissions (high entry barriers) and quality institutions are a few (low competition). Teaching staff is hired at salaries decided by the management of the institute (weak suppliers' bargaining power). Competing courses though may be available, but do not generate enough confidence amongst students (few substitutes). Thus, education industry can be said to be an example of an attractive industry

6.2 Political, Economic, Socio-cultural, Technological, Legal and Environmental (PESTLE) Analysis

PESTLE Analysis stands for Political, Economic, Socio-cultural, Technological, Legal and Environmental Analysis. Some models also extend this to include Ethics and Demographics, thus modifying the acronym to STEEPLED. This analysis is done more from the perspective of a business which is looking to setup unit offshore and analyzing several countries to choose from. This model primarily analyses the external environmental factors that will act as influencers for a business.

To do business in any country, a business must know each of the above factors very well and how changes in any/either of these would impact business. Let us see each one of these individually in brief here.

Political Factors: Countries can have a variety of political structures. Communist countries would have social objectives above anything else while capitalist ones would not necessarily have all responsibilities of a welfare state. Further, capitalists also exhibit differences amongst themselves in terms of their approach to the social welfare schemes. Stability in legislation and policy, minimal corruption, bureaucracy, communal tensions and violence coupled with maximum freedom of press, ease of doing business and quick turnaround time are some of the factors which investors would look at in a country. Healthy public finances and a consistent fiscal policy furthering investment in infrastructure are some other important parameters for investors.

Economic Factors: The economic parameters of a country such as GDP growth and its contributors, inflation and interest rates, composition of imports and exports, balance of payment and exchange rate stability, stable monetary and fiscal situation, well developed financial markets, taxation and others, will define its attractiveness as an investment destination. Whether a country depends upon exports or internal consumption, whether this internal consumption is driven by imports or domestic manufacturing, whether the country has high inflation and hence a falling currency etc. are some of the first questions which an investor will think before investing in any country. Country's dependence on other countries in terms of important natural resources such as oil, monitory policies of the Central Banker, Balance of payment positions and forex reserves etc. are very important for an investor to get a comfort level about a country's economic situation. India has seen the worst and the best phases of economies in the last three decades.

Socio-Cultural Factors: The social and cultural aspects of the population of the country, such as the demographic profile in terms of age, education and skills, health, social values, lifestyle factors, all affect the choices that people make in what they buy and consume. Cultures affect businesses in multiple ways. With young population in India, India offers different opportunities and challenges in comparison to say Japan with aging population. With the change in culture, there is a change in the economic activity as well. For example, given nuclear families and working spouses in metro cities in India, there has been an increase in demand for day cares facilities, packaged foods and hotel chains/restaurants. Competitive pressures at the young generation are also resulting in life style diseases such as diabetes, sugar, hyper tension etc. This offers opportunity set for several new businesses in the country.

Technological Factors: No dimension of life can ever be imagined today without technological support. Technology is playing crucial role in taking businesses and society to the next level. Development of a scientific temper amongst students leads to an ever technologically evolving society. Countries pushing R&D activities are bound to be at the forefront of technology.

Availability of technology savvy population and institutions driving technology based initiatives and infrastructure help a country attract investors.

Legal Factors: Legal architecture of the country and ability of legal system to support and protect businesses is what businesses look for in a country. Consistency of legal aspects and no arbitrary changes give comfort to the businesses and investors both. In India, recently the Vodafone retrospective tax case and also the cancellation of telecom licenses and mining licenses etc. have been examples of discomfort to the investing community. Transparency in the legal environment and enforcement of laws are things which investors would favour.

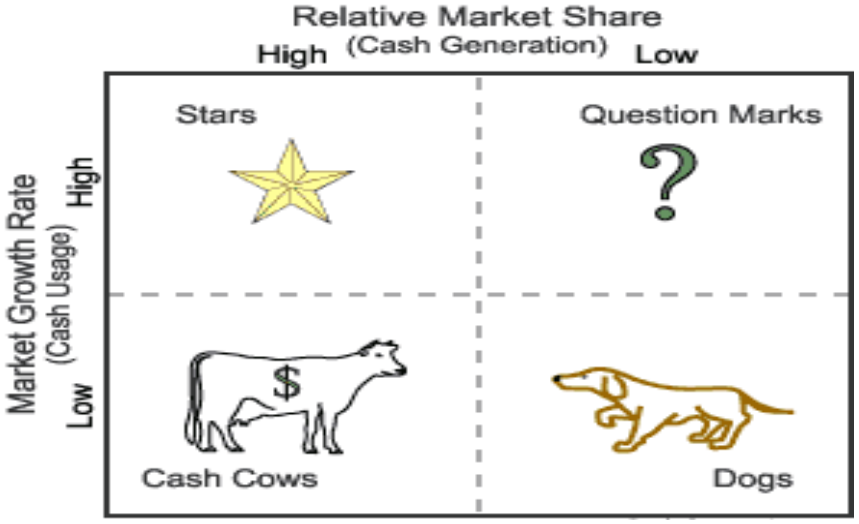
Environmental Factors: Developing nations are generally bound to emit environment harming gases in the atmosphere. A country's awareness of environmental issues and the policies relating to pollution control, waste disposal, mining and protection of natural flora and fauna, rehabilitation of displaced local residents, are all thorny issues, which if not clearly spelt out unambiguously can lead to operational and legal issues in the future and ultimately loss of time, money and resource for a business. Investors look for clear polices of government on these issues.

As the government pushes for India to become a manufacturing hub, environmental issues are creeping up and these are acting as one of the deterrent for investors ready to enter India.

Not all the factors referred to above affect all companies equally. Evaluating the impact of each factor and its criticality for the business is an important step to follow.

6.3 Boston Consulting Group (BCG) Analysis

While models such as Porter's and PESTLE are used to analyze the industries and economies, the BCG Analysis, developed by the Boston Consulting Group, looks at different segments of a business unit at portfolio basis through the lenses of market growth and cash generation. BCG created a matrix based on sensitivity of growth and cash generation as defined below in pictorial manner (picture courtesy – QuickMBA.com):



As per the matrix, business segments can be classified as:

Stars: These are segments in a business where market is growing rapidly and company is having a large market share. This segment generates increasing cash for the business with the passage of time. Cera Sanitary ware could be a good example of "star" with large market share, continuous growth and significant cash generation.

Cash Cows: These are segments which require low cash infusion for investment to maintain market shares because of low growth prospects but at the same time steadily generate cash for the company from the established market share. Navneet Publications, which is into the business of books and notebooks, could be a good example of "cash cow". The industry grows at a predictable and steady rate each year. With strong brand name, well penetrated distribution channel, ready market, and strong balance sheet, all that the company needs to do is change the content every time some syllabus changes and reap the benefits in the form of steady cash flows. Colgate is another example of the cash cow.

Question Marks Business segments in a fast growing market, but having low market share. The right strategies and investments can help the market share of the business grow, but they also run the risk of consuming cash in the process of increasing market share and in the end turning out to be not enough cash generating. Tata Nano can be considered as an example of a question mark, which did not succeed; whereas, Bajaj Pulsar may be considered as an example of a question mark product which succeeded.

Dogs: Business segments, which have slow growth rates and intensive competitive dynamics which lead to low generation of cash are categorized as Dogs.

BCG matrix provides interesting sense of the businesses/segments in terms of their attractiveness for the investors.

6.4 Structure Conduct Performance (SCP) Analysis:

Another method of analyzing industries is to look at the industry structure (monopoly, oligopoly), its conduct (commoditized or specialized, seasonal or round the year, cyclical or non-cyclical etc.) and finally its performance (RoE, RoIC, WACC, etc.). Structure, Conduct, Performance (SCP) analysis approaches the industry evaluation exactly with this categorization.

SCP analysis may be seen as extension of Porter's model where probably first two points structure and conduct were captured. Under SCP model, one also goes into the financial

dimension of industry from analysis perspective. Basic elements of SCP analysis are captured below in brief:

Structure analysis: Industry structure refers to the competitive intensity in the industry (number of players), concentration of business in industry, relationship among the various players, market size, its growth rate, etc. In this section, analysts study:

- How many players exist in the industry
- Is there domination of few players in the industry
- How is business scattered between organized and unorganized players
- Are there any threats from substitute products
- How are equations between suppliers and buyers
- Is there backward/forward integration already in existence or a possibility in future

Thus, very broadly coverage of analysts in this section overlaps with what we study as part of Porter's 5 Forces model and the SWOT Analysis model.

Conduct analysis: The structure of the industry, as described above, will define the conduct of the businesses on aspects such as pricing and product innovation. Each industry will have its peculiar behaviour. Umbrellas and raincoats would be seasonal businesses and FMCG and Pharma would be round-the-year ones. High interest rates may deter people from purchasing real estate and 4 wheelers, but 2-wheelers may not be impacted that much. Mining business may be commoditized but FMCG and white goods may be sold purely based on power of brands.

So, while looking for an industry's conduct, analysts have to study several factors such as:

- Is business cyclical in nature
- If business is cyclical, what are the factors affecting the business – commodity prices, interest rates, currency prices or some other global factors
- Is it a highly specialized business which requires skilled labour or it is a low skill based industry
- For skilled based business, is there enough talent available
- How customers choose the products/services
- How will technological changes affect this business
- Is business heavily dependent on government policies

Performance analysis: Based on structure and conduct of the industry, industry would generate financials for the investors/owners. Businesses with High return on capital/equity are the ones

which create wealth for shareholders/owners in the long run. While analyzing performance of an industry, analysts will look at several numerical ratios, which are dealt with in great detail in the unit on quantitative analysis.

6.5 Key Industry Drivers

Each industry has its own specific drivers, a study of which gives the analyst an idea of the sector as well as the company under consideration. Let us see below some of the key drivers for the prominent industries in India.

Telecom: A key parameter while analyzing this sector is Average Revenue Per Unit (ARPU). It is calculated by total revenue divided by number of subscribers and the higher it is, the better for the company. It must be noted that India has amongst the lowest ARPUs in the world. Other parameters like mobile penetration and spectrum costs are also important for the Telecom industry.

IT/ BPO/ KPO: The IT sector in India grew primarily due to a large available pool of English speaking young talent at a low cost. IT companies earned in Dollars and spent in Rupees and made huge profits. Even today, USDINR rate, attrition rate among employees, concentration of revenues with selected clients, concentration of geographies etc. are important parameters to watch out for in IT and related sectors.

Banking/ NBFC/ Housing: Monetary Policy by the RBI is the single largest impacting factor for this sector. NPA levels, provisioning norms, tight/loose regulatory reserve requirements all impact banks and NBFCs. Typically, in a falling interest rate scenario, banks tend to do well due to double impact of falling yields on G-Secs holdings and larger demand for loans. NPAs also typically are low when interest rates are low as defaults become less due to affordability of Equated Monthly Instalments (EMIs). On the source of funds side, low cost deposits (Current Account, Savings Account - CASA) is a determining factor for banks.

Media: Any media company depends upon content, hence a company generating its own content will have an advantage over others. Distribution companies would almost always be under pressure as there is intense competition in the sector and content providers to media companies would be charging a premium. Television Rating Points (TRPs) are the most widely tracked indicator in electronic media. A high TRP means more people are watching the show/ channel and hence it can get more advertisers and can charge at a higher rate. Whether electronic or print – in media – content and viewership are king.

Retail: The retail sector saw a huge jump in the first decade of the new millennium. Retail store formats rely on low cost procurement of goods from manufacturers and selling it on wafer thin margins to a large number of people. Hence foot falls becomes an important industry driver. Now a days, many retail chains have started integrating backwards and have started selling their own products as well. Margins are obviously higher when they sell their own products at their own counters. Retail analysts would typically analyze all these factors and more.

6.6 Regulatory environment/framework

Industry analysis cannot be complete without adequate knowledge of the rules of the game. Even small changes in regulatory framework can have big impact on the businesses.

For example, the whole discussion in India on FDI in multi brand retail has been revolving around how much should retailers invest in developing the back end infrastructure, what could be construed as back end infrastructure, could they buy out some firms existing set up, how much minimum they should purchase from Indian vendors, etc. Changes in the environment policies have resulted in closure of various mines and have affected the businesses drastically. Cancellation of Telecom licenses have affected the business in that industry. The latest amendments made to the Companies Act have changed the entire landscape for doing business in India.

Therefore, analysts should pay enough attention to the regulatory aspects of businesses.

6.7 Sources of information for industry analysis

There are several sources of information on industry. Some of them are stated below:

- Industry reports from various sources - industry journals and media reports
- Annual Reports of companies in the Industry – 'Management Discussion and Analysis' section
- Associations/Trade Bodies publications
- Relevant ministry website/publications

Sample Questions

1. **An industry where rivalry is high, the end result will be _____ pricing power and _____ incomes for the industry participants.**
   a. Lower; higher
   b. **Lower; lower**
   c. Higher; higher
   d. Higher; lower

2. **Who can exert a lot of pressure and dictate prices, if there are a large number of sellers with similar products/services?**
   a. Sellers
   b. **Consumers**
   c. Producers
   d. None of the above

3. **Which of the following is considered as an economic factor in PESTLE analysis?**
   a. Forex reserves
   b. Monitory policies of the RBI
   c. Country's dependence on other countries in terms of important natural resources
   d. **All of the above**

4. **What does Industry structure in Structure Conduct Performance (SCP) analysis refer to?**
   a. Industry Growth rate
   b. Relationship among the various players in the industry
   c. Market size
   d. **All of the above**

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CHAPTER 7: COMPANY ANALYSIS – QUALITATIVE DIMENSIONS

LEARNING OBJECTIVES:

After studying this chapter, you should know about:

- Different kinds of Business Models
- SWOT Analysis
- How to understand quality of management and governance model of a company
- Pricing Power and Sustainability of power
- Critical Success Factors of a company
- Compliance Orientation of the company

Money invested in the market is always a bet on the future performance of businesses. As analysts, we understand that great earnings and assets make a business valuable; and, earnings and assets are determined by the qualitative aspects of businesses. One must appreciate that sooner or later, 'Great Quality' would reflect into 'Great Quantity' for investors.

The historical performance is most often the trigger to analyze a business. Other triggers include changes in macroeconomic or microeconomic factors that make a business an attractive investment proposition or an expectation of a great long-term performance as in the case of venture-capital investing. Historical financials give us great sense of qualitative aspects of business (this aspect is dealt with in the next unit). If financials are great, hopefully, quality of business is great; though, it is not a guarantee given the subject of corporate mis-governance and financial manipulations.

Once history is analyzed, real research starts, which deals with the analysis of qualitative aspects of business today and how they are supposed to be going forward. Research analysts should develop great sense of understanding businesses. They should attempt to become wiser and develop the ability to ask qualitative questions such as:

- How are things changing around (consumer tastes and preferences)?
- What would be relevant tomorrow and what would become irrelevant?
- How is competition shaping up in the industry? Who are the new entrants including external ones?
- What are the entry barriers in the business and will they remain intact in the future?
- Why would a business continue to lead?
- Is there a chance of regulatory changes in the industry?
- What are the threats to the business?

- What are the opportunities to the business and whether business has required execution capabilities to address the opportunities effectively?
- How is the quality of management?
- What is the perception of customers towards the products and services?
- Why customers buy the products/services. Is there strong brand association?
- Are the distributors/retailers happy selling the products/services?
- How is organization structured? Are the people happy lot in the company?
- What is perception of bankers and other stakeholders of the company towards it?
- Is the company following governance oriented policies/follow various compliance requirements seriously?
- Is the management careful about the risk management?

The list of questions and the relevance of each question will vary with the type of business being analysed. Objective behind questions is to understand various aspects of the business in great details. This understanding is important to interpret quantitative and qualitative information of the business and convert it into a robust investment advice. A clear understanding of qualitative aspects is where difference will get created between good analysts and others. Some aspects of quality are dealt with in this unit.

7.1 Understand Business and Business Models:

Equity investing is all about part ownership in a business. Therefore, it is important to understand the business or business model of the company before investing in it. Accordingly, starting point of qualitative research on any business has to be questions such as:

- What does company do and how does it do?
- Who are the customers and why do customers buy those products and services?
- How does the company serve these customers?

Almost all successful fund managers are never tired of repeating this thought that one must invest only is such firms where one understands the business. In the checklist for research, this is one of the most prominent questions – 'Do I understand business?' No analyst should move to the next question if he/she can't address what a company does in a line with preciseness and clarity.

There are over 6000 companies listed on Indian exchanges. It is not possible to track and understand all of them. Investors should consider buying shares of a few companies they understand rather than invest in a number of companies they don't understand. Quoting

Warren Buffet: Wide diversification is only required when investors do not understand what they are doing.

Further, each sector has its own unique parameters for evaluation. For the retail sector, footfalls and same store sales (SSS) are important parameters, whereas for banking it is Net Interest Income (NII)/ Net Interest Margin (NIM). For telecom, it is Average Revenue Per User (ARPU) and for hotels, it is average room tariffs etc. Analysts must possess an in-depth knowledge of the sectors while researching companies.

Further, each company will have its unique way of doing business. The efficiency with which products and services are produced and delivered to the customers may vary from one business to another and will significantly impact its earnings. Therefore, it becomes imperative for analysts to understand the entire business model of the companies. It is relevant to quote management guru Dr. Garry Hamel: *"Competition in the market place is not between products and services but between the Business Models of the competing companies."*

7.2 Competitive Advantages/Points of differentiation over the Competitors

While analyzing a company, it becomes imperative for analysts to find points of differentiation for the business from others within the industry/sector. As a sector/industry goes through ups and downs, so do the players in that sector/industry, however, each company will have its unique ways of mitigating risks and maximizing returns. These unique differentiating points are what an analyst should look for.

Presence of great brands, existence over long periods of time, history of clean and ethical management, aggressive takeovers and buyouts, monopoly/ large market share, great execution capabilities, great distribution network, great customer loyalty etc. are some of the qualitative aspects which differentiate companies from one another. Here are some examples on the subject.

Brands: Companies in the FMCG space have to constantly create brands in various categories and ensure that these brands are nurtured because 'products sell but brands profit'. Nestlé's Maggi is a classic example of brands ruling market for a long time and differentiating a company from peers.

Long track record: At a time when IPOs are hitting every few years, companies like SBI, which are 200 years old or GE in the international markets give confidence to investors as these companies have seen many business cycles and are hence having more knowledge and experience within to meet new challenges.

Clean and Ethical Management: Tata's and Infosys are a living testimony to the importance of ethical behaviour. Time and again, their brands have strengthened due to this single factor – Ethics, in addition to many more competencies.

Takeovers/ buyouts: In their bid to expand, some companies believe in aggressive inorganic expansion – meaning takeovers. The RP Goenka' group in its early days, the Piramal group or in the financial markets space L&T Mutual Fund have all resorted to takeovers and have succeeded. At the same time, Tata's buyout of Corus or Birla's buyout of Novellis has put pressure on these businesses and these acquisitions have not quite worked out the way the analyst community expected.

Monopoly/ Large market share: This is again a function of presence of strong brands or products becoming brands themselves. Fevicol, LIC, Bisleri have all successfully carved a niche for themselves and now almost single-handedly control the market and represent the industry.

7.3 Strengths, Weaknesses, Opportunities and Threats (SWOT) Analysis

Every business has its own strengths and weaknesses. It is good for the analysts to clearly understand and document both of these to have a clear picture of the situation. Similarly, opportunities to the business and potential risks to the business can be documented by the analysts in the form of opportunities and threats. In a way, SWOT analysis is nothing but a way of documenting strengths, weaknesses, opportunities and threats at one place in a concise manner.

While Strengths and Weaknesses are internal to the company, Opportunities and Threats deal with the external environment of the business. SWOT analysis gives readers a short but comprehensive and meaningful snapshot of a business.

7.4 Quality of Management (Including Independent Directors) and Governance

Governance, in simplest sense, means telling the "Truth" in all aspects of life. Interestingly, either management is ethical or not ethical, as there can't be anything in between.

Warren Buffett Quoted once – *"I look for integrity, energy and intelligence in management."* Please remember, in absence of first quality (integrity), management with later two qualities will crush the business and investors at some point in time. While handing over the money to the management, analysts should focus significantly on the integrity/ethical aspect of the business. Unfortunately, this aspect seems to be totally missing from the research reports

today. Market may condone incompetent management but not the unethical management, over a period of time.

A sterling example of this is brand 'Amul' – which has become synonymous with milk in India. Right from its inception till date, it has taken lakhs of small farmers all along with it and still has ensured that each person of the co-operative is given his/ her due in the most transparent manner while on the client side has always ensured that quality is never compromised. Other names we can think on high ethical standards are HDFC group, Tata's etc.

Analysts should also pay attention to the quality of independent directors in a business. First question to address there is whether independent directors are truly 'independent'. Unfortunately, again, independent directors is a big fallacy where companies/promoters choose to keep their friends and others, without thought of relevance, as their independent directors. This is treated as more a tick mark exercise rather than a genuine exercise to bring some thinkers to the business to take it forward. Analysts should focus on the qualifications and experiences of these independent directors, how many meetings they attend and what are their contributions to the business. It may be good practice to interact with some of them to understand them better.

7.5 Pricing Power and Sustainability of This Power

Pricing power means ability of the company to command pricing of its products or services. While companies would love to charge as much as they can to the customers, in practice, it may not be possible. Pricing is a function of many parameters, external and internal, least of which is the company's will. Most of the businesses are price takers and not price makers. Take example of Aviation or Telecom. Companies in these businesses decide their pricing on the basis of what the competition is charging the customers.

In any competitive industry/business, pricing command is virtually missing. It reminds us the quote of Charlie Munger – "in a competitive landscape, every business is as smart as its dumbest competitor." This is because if a competitor reduces the prices dramatically, others would have no choice but to match that price to stay in the business. The pricing power that a company has will also depend upon the elasticity in demand exhibited by the product or service. If an increase in price results in a reduction in demand, then the ability of the company to pass on cost increases or have a higher mark-up will be limited.

Therefore, pricing power is generally a function of industry dynamics, elasticity of demand and branding and customer loyalty/addiction. Presence of strong brands and/or virtual monopoly play an important factor in the pricing power. Tobacco based businesses are an example of such

businesses wherein, constant rise in taxes by the Govt. are passed on by the companies to their end consumers and even then there is no impact on volumes as consumers are generally brand loyal (read addict). Nestlé's Maggi and Nescafe are also classical examples of pricing power as prices keep going up but volumes don't fall.

7.6 Organization Structure

Company, by definition, is an artificial person, created by law and has perpetual existence. Accordingly, organizations need to be systems and processes driven rather than individuals driven. Therefore, there has to be a clear hierarchy of decision making in an organization and it should not be dependent on one or two individuals. If organization is dependent on one or two people, there is also risk to investors called "Key man Risk – what if key one or two individuals are not there tomorrow".

Analysts should pay attention to how do the decision making process works in the organization. Is the company one man show or driven by a team of professionals based on defined processes and systems? Are there clear succession plans in place for key position? These aspects, while missing in most of the reports today, would play critical role in future success or failure of businesses.

7.7 Critical Business Drivers/Success Factors

Each industry/sector has a specific set of factors which affect its profitability and prospects. For example:

- Retail sector closely monitors footfalls and same store sales (SSS)
- Banking works on Net Interest Income (NII)/ Net Interest Margin (NIM)
- Telecom discussions revolve around Average Revenue Per User (ARPU)
- Hotels focus on average room tariffs and occupancy levels
- Currency levels are critical for export oriented IT companies and import oriented oil companies
- On-line businesses are dependent on internet penetration and changing habits of people on shopping

Further, any small change in the industry configuration can trigger significant change in the industry prospects. For example, in the General Budget of 2014, an announcement increased the definition of 'Long Term' from 1 years to 3 years for calculating capital gains on units of debt Mutual funds units and suddenly the way the industry was selling this product changed. This one factor, resulting in change in taxation rule for Debt Mutual Funds, has led to investors

and distributors shying away from this product. Mutual funds are reinventing themselves on this product to get the investors back.

Buying a company's shares without having knowledge of these critical drivers could mean purchasing a potential loser. Analysts should be able to put their fingers on critical drivers of an industry and analyze them in great detail for the business under consideration.

7.8 Risks in the Business

Promoters love to talk of the grand future they dream and visualize. Very rarely would they talk about the risks associated with the journey of converting their dream into a reality. For example, borrowing from the international market at low rates looks attractive, however, adding the angle of currency risk to the discussion turns the whole discussion on its head.

Entrepreneurs are by nature risk takers and have the psychological ability to bear shocks. Ruper Mudroch failed thrice before he successfully created the Star Empire. Steve Jobs was thrown out of 'Apple' his own company and later was called back. In the meantime, he started another successful venture! While businessmen would be able to bear these risks, not all investors would.

There are risks in every business, which may range from business aspects to operational aspects to execution aspect and others. The risks may be apparent and known or they may be unknown.

Analysts should focus a lot on the risk aspects in various dimensions of the businesses. They should continuously ask question "What could go wrong in the business". If promoters state that nothing could go wrong in the business, clearly they fall in to the category of "people who don't know that they don't know". These types of promoters need to be avoided. A good businessmen would always have cognizance of the risks in the business and the steps that need to be taken to protect the business from their effects.

7.9 Compliance Orientation of the Company

Today, by regulation, having a compliance officer in the company is a must. Similarly, announcing results every quarter, giving details of share-holding patterns, handling investors' complaints in an appropriate manner, disclosing allocation of money raised from investors in an IPO/FPO, providing information on the changes in the management's shareholding in the company, among others are all expected to be done by regulation and are a part of compliance requirements. Some companies are very compliance oriented and follow rules and regulations

in words and spirit. On the other hand, many companies pay no attention to the subject and are regularly pulled by regulators/exchanges and other regulatory and government bodies for non-compliances. Track record of compliances by the company should become a part of checklist for the analysts. And, we must also remember what Warren Buffet stated: *Honesty is a very expensive gift, don't expect it from cheap people.*

7.10 Documentation on Guidance v/s Actuals

Investors always are curious to know what the future plans of a company are. Many management take the full advantage of this curiosity and have a track record of painting a rosy picture each time they speak to manipulate emotional aspects of audience. In a way, this is fraudulent and cheating. On the other hand, there are businesses which are brutally honest and state clearly about their mistakes, opportunities lost, dim future prospects of business. Actually, as a good business practice, businesses should only talk about opportunities and challenges rather than talking about future nos.

Unfortunately, no one keeps track of what a management said and what it did. Good research analysts would always go to the track record of commitments and the delivery. A track record of company's actual performance vis-à-vis its guidance at the beginning of a quarter/ year can give analyst a good idea of how much of the company's talk should be taken at face value and how much should be discounted.

7.11 Sources of Information for Analysis

There are multiple sources of information on a company. Some of them are defined below. In addition, there are various paid and free databases, which can be used by analysts to analyze the companies:

- Annual/Quarterly reports - most easily available, reliable and consistent source of information
- Conference Call transcripts
- Investor Relation (or Company) Presentations
- Management interviews on internet
- Company website
- Ministry of Corporate Affairs website
- Research Report from Credit Rating Companies
- Research Report from various other sources – media reports
- Parent Company's annual report and website
- Competitors' website including international competitors

- Print media reports on companies
- Discussion with suppliers, vendors, consumers and competitors

Sample Questions

1. **If financials are great, it is expected that the quality of business is also good. State whether True or False.**
   a. **True**
   b. False

2. **Corporate Governance takes into account which aspect of the Management?**
   a. **Integrity**
   b. Profitability
   c. Efficiency
   d. All of the above

3. **Shareholding pattern and changes therein have to be informed by the companies to exchanges periodically. State whether True or False.**
   a. **True**
   b. False

4. **A good analyst must keep a track of disclosures, commitments and deliveries of an organization periodically to adjudge a company. State whether True or False.**
   a. **True**
   b. False

CHAPTER 8: COMPANY ANALYSIS – QUANTITATIVE DIMENSIONS

LEARNING OBJECTIVES:

After studying this chapter, you should know about:

- How to read a profit and loss account statement
- How to read a balance sheet
- How to read a cash flow statement
- Different kinds of taxes affecting companies
- How to do comparison with peers
- Dividend and Earnings history of the company
- History of Corporate Actions of the company

8.1 History of Business vs. Future of Business

The historical performance of a company is the initial parameter used to select companies for research and analysis in industries seen as favourable for investment. Evaluating each company in the industry may not be practical. Therefore, best way is to look at their history and then select few businesses to work on. The history of a company is best illustrated by its financial performance. Typically a review of the previous five years will give a snapshot of the business and the consistency in performance. If financials are good, they would give a sense of quality of business being good and if they are bad, for sure, we need to just drop the business. However, good financials do not essentially mean that business is great as quality of those financials can always be a question mark.

Once companies have been selected on the basis of their historical performance, the next step is to see how the business environment in the future is likely to affect their performance. For example, consumer electronics firms such as Mirc Electronics (Onida) and Videocon, did well in a scenario where there was less competition and not much of product innovation required. Once the market opened out to international companies such as Sony, Samsung, LG and others, who brought the latest technologies into India, these companies started losing market share since they were unable to compete on the technological front. A strong past performance need not necessarily indicate continued strength. This will depend upon the company's ability to adapt and respond to changing circumstances in the industry.

There are some sectors like Pharma and FMCG, known as defensive sectors that continue to grow at more or less a steady pace. Talcum powders would sell more in summers and body lotions in winters. Usage of products from these companies is fairly constant and well known.

New products or innovations from one company is quickly and easily replicated by others in the industry. Hence, in such cases using history to extrapolate future may be relatively easier, however, the same must be done with substantial caution.

On the other hand, past financial performance may not be good indicator for companies in the cyclical industries. For example, sectors such as banking and capital goods, among others, are sensitive to the interest rate levels in the economy. In periods of high interest rates, their financial performance is unlikely to be impressive. However, to ignore these companies based on their performance in high interest rate period would mean missing a good opportunity when interest rates start falling. Similarly, companies in sunrise industries will exhibit tremendous growth rates in the initial years. Using these growth rates as the base for projections for future may prove to be misleading as terminal growth rates would taper off as more companies enter this space and revenues and profitability moderate. Software industry in the mid-90s is a classic example of this phenomenon.

Hence, while it is useful to look at history, in almost all cases, there will be a different view point required and no generalizations can be made.

8.2 Basics of Profit and Loss Account (P/L)

Profit and Loss statement (P/L) statement is a document which contains information on the revenues, costs and profitability of a firm for any given period. Financial results are published each quarter by companies and hence we get quarterly P/L statements as well the final audited P/L statement with the annual report.

Given below is the most typical and simple structure of a P/L statement:

Net Sales (1)	100
Direct Costs (2)	20
Earnings Before Interest Tax Depreciation and Amortization (EBITDA) (3) = (1) – (2)	80
EBITDA Margin (4) = (3)/ (1)	80%
Depreciation/ Amortization (5)	20
EBIT	60
Interest (6)	20
Other Income (7)	5
Profit Before Tax (8) = (3) – (5) – (6) + (7)	45
Tax (9) [@ 30%] = (8) * 30%	13.5
Profit After Tax (PAT) (10) = (8) – (9)	31.5
PAT Margin (11) = (10)/ (1)	31.5%

Net Sales: This is the income which the company generates by selling its goods and services. All indirect taxes such as Excise Duty, Value Added Tax (VAT), Service Tax etc. have to be deducted from the Gross Sales to get the Net Sales figure as these taxes are collected by the business for the government and don't belong to the business. From an analysis perspective, it is important to understand the contribution made by different segments and markets, the cyclicality of the sales revenues, and the management's strategy to manage any risks to sales growth, such as new products, diversification into new markets, etc. Growth in sales must be analyzed to determine the contribution of increase in volume and/or increase in price.

In the above example, we have Net Sales of Rs. 100.

Direct Costs: These are costs which can be attributed directly to business. Examples of these types of costs are raw material, salary, electrical costs, and others. Reducing operating costs will translate into higher profitability. Lower the direct costs, higher the operating efficiency of the firm. Costs may be variable, such as raw materials, semi-variable, such as employee costs or fixed, such as plant and machinery. Companies with high fixed costs can benefit from operating leverage. This is because an increase in sales can be made without taking on additional costs. In periods of growing sales such companies benefit from better profit margins. The cost structure of the companies also exposes them to risks when business slows down.

In the above example, we have Direct Costs of Rs. 20.

Earnings Before Interest Tax Depreciation and Amortization (EBITDA): This is the difference between Net Sales and Direct Costs. EBIDTA is a measure of the operating efficiency of the company. It enables comparison between companies that may have different capital structures, depreciation policies and tax rates. Higher the EBITDA, better the firm.

In the above example, EBITDA is Rs. 80, calculated as 100 (Net Sales) – 20 (Direct Costs).

EBITDA Margin: This is a ratio which calculates the EBITDA as a percentage of Net Sales. Absolute numbers make it impossible to compare two firms, however, when converted into percent, comparison can be done easily. Higher the EBITDA Margin, better the firm.

In the above example, EBITDA Margin is 80% [(EBITDA)*100/ (Net Sales)].

Depreciation/ Amortization: Whenever a company purchases an asset, it is used for a long period of time and hence, it does not make sense to show entire expenditure at once in the P/L statement. In the above example, to sell goods worth Rs. 100, the company needs a machine which is worth Rs. 100. Now, if the company were to take a loan of Rs. 100 and purchase the machine and show it as expense in the first year itself, three problems arise:

- The company immediately goes into loss as income is Rs. 100 and expenditure would overshoot it.
- The machine would still be available for the company to use for future years but it cannot be shown as an asset.
- As the company would go into losses, it would not pay tax and that would result into loss of tax revenue for the Govt.

In order to prevent these anomalies from occurring, the expense of buying machine is divided into the estimated life of the asset (machine, in this case) and each year a part of the expense is shown in the P/L statement and remaining amount is kept with the company as an asset and is shown in the Asset portion of the balance sheet.

In our example, each year the company would show Rs. 20 as expense and correspondingly reduce the Asset by that much amount, so that in 5 years the entire machine would be 'consumed'.

Amortization is the term used for depreciation of intangible assets such as copyrights and brands.

While depreciation or amortization is shown as an expense in the P/L account, there is no actual cash outflow on account of this expense each year. The expense has been met upfront when the asset is bought.

Deducting Depreciation/ Amortization from EBITDA gives us EBIT.

In the above example, Depreciation/Amortization is Rs. 20.

In the above example, EBIT is Rs. 60 which is calculated as 80 (EBITDA) – 20 (Depreciation/ Amortization)

Interest: Interest is an expense incurred on loans taken by the business. A change in the interest costs of the company can be attributed to an increase or decrease in the debt outstanding, change in interest rates or currency fluctuations in the case of foreign currency loans.

In the above example, the company is paying Rs. 20 as interest.

Many of the best companies in India as well as in the world have extremely low or even no debt. Warren Buffet's view on debt would help us understand with more clarity, the dangers of high debt:

"Good business or investment decisions will eventually produce quite satisfactory economic results, with no aid from leverage. It seems to us both foolish and improper to risk what is important (including, necessarily, the welfare of innocent bystanders such as policyholders and employees) for some extra returns that are relatively unimportant."

Other Income: This is recurring income from other sources such as rent, interest, dividend, commission etc. It should at best be small portion of the Net revenues of the company. If this income is quite high in comparison to sales, it warrants analysis of the business model of the company. It is best to compare other income of the business over last several years and also find if there were specific triggers for high other income in some types of businesses.

For example: In banking, there are times when interest rates are high and due to which, while on one hand banks keep receiving deposits, on the other hand, loan off take is relatively slow. In such cases, banks invest in long term G-Secs and benefit from the rise in their prices when subsequently interest rates fall. In such years, other income accounts for a huge component of the total income.

In our example, other income is Rs. 5.

Profit Before Tax (PBT): Deducting Interest and Depreciation/Amortization from EBITDA and then adding other income to it gives us the total profit of the company for the period after meeting all the expenses. Taxes need to be paid on this profit and hence it is known as PBT.

In the above example, PBT is Rs. 45.

Tax: This is the money which goes to the Government. At present, corporate tax rate in India is 30%.

Profit After Tax (PAT): This is the final residual amount which remains with the company after paying all its stakeholders other than shareholders. This is the shareholder's money and may be paid out as dividend or may be retained in the company partially or fully for further expansion.

In the above example, this figure comes at Rs. 31.5.

8.3 Basics of Balance Sheet (B/S)

A Balance Sheet contains the sources of funds for a company and application of those funds at any point of time. As is logical, sources of funds and their application must match at aggregate level, hence, both the sides of the balance sheet must match at all times (as also the name suggests).

Given below is a sample balance sheet:

Sources (Liabilities)		**Application (Assets)**	
Equity (a)	100	Fixed Assets (f)	200
Reserves & Surplus (b)	28	Current Assets (g)	50
Net-worth (c) = (a) + (b)	*128*		
Long Term Debt (d)	100		
Current Liabilities (e)	22		
Total (c) + (d) + (e)	**250**	Total (f) + (g)	**250**

Sources of Funds: A company has two primary sources of funds, owners' funds or equity capital and borrowed funds or debt capital. Let us see each one of them in brief below:

Equity: This is the money which the promoters bring into the business when it is launched, and subsequently by additional shareholders as and when required, who also become owners of the company to the extent of their shareholding. This is the owners' investment in the business. An increase in the equity capital may dilute the proportionate holding of existing shareholders and therefore their participation in the profits of the company. A dilution may occur because of additional share capital being raised or a conversion of debt into equity.

In the above example, we have Equity as Rs. 100.

Reserves & Surplus: As the company makes profits, they are moved each year from the P/L statement into the balance sheet under the head 'Reserves & Surplus'. Thus, this is also shareholder's money, which they chose to keep in the company and reinvest in the business. While equity may be called contributed capital, reserves and surplus is called retained capital. Apart from the reserves created out of retained profits, the balance sheet may show other reserves such as share premium reserve (collected when shares are issued as premium to face value) or a revaluation reserve, which are not created out of the profits earned.

In the above example, we have R&S = Rs. 28.

Net-worth: Equity Capital and Reserves & Surplus together represent Shareholder's Funds also known as Net-worth or owners' capital.

In the above example, adding Equity Capital of Rs. 100 and R&S of Rs. 28, we get Net-worth (Shareholder's Funds) as Rs. 128.

Long Term Debt: Any debt taken for a period of more than 1 year is considered to be non-current liability or a long term loan. This may be in the form of term loans taken from financial

institutions or debt securities issued such as debentures. Investors prefer companies with low liabilities. However, the nature of the business and the lifecycle of the company may dictate the level of debt in the balance sheet.

Industries such as IT, education, Business Process Outsourcing (BPO) etc. do not require huge investments either in capital assets or for procuring raw materials and other expenses. Hence, such sectors generally exhibit a balance sheet which has very low long term debt. In case a company has high debt in this sector, it would generally be temporary for expansion purpose when the company is in the growth stage.

Companies in the banking and non-banking space cannot be analyzed on this parameter as their business requires them to garner long term deposits, which are then disbursed as loans.

Heavy capital goods based manufacturing companies need to have a judicious mix of debt and equity, depending upon project at hand, type of industry, interest rates, etc.

Classic examples of companies losing investors' interest due to high debt are Suzlon, Bhushan Steel, HCC and Kingfisher. Wockhardt is an example of a company which was heavily under debt but managed a turnaround.

In the above example, Long Term Debt is Rs. 100.

Current Liabilities: These are liabilities or payments, which have to be made within a year. Salaries, Utility payments, Trade payables, working capital loans, short-term debt raised through the issue of commercial papers, unclaimed dividends, maturing long term debt and others are typical examples of current liabilities. Current liabilities are analysed to determine the efficiency with which the working capital is managed. For example, the Trade payables days calculated as trade payables/Cost of sales x 365 days, is the time taken to pay the suppliers. A high number indicates that the company is in a strong position and is able to get credit from its suppliers without tying up its cash. But very high trade payable days should be investigated to see if the company is facing a fund crunch or even insolvency.

In the above example, Current Liabilities stand at Rs. 22.

Application of Funds: This is the right side of the Balance Sheet, where details of assets are given. A company can have fixed long term assets like plant and machinery or short term assets like investments in liquid funds or inventory. Let us see in detail the two broad heads of Application side of the balance sheet.

Fixed Assets: These are assets which a company builds to produce goods and services. A manufacturing plant would need heavy machines, a software company would need computers, a real estate company would need land, etc. these are all assets from which the company would generate revenues.

Furniture and vehicles are assets which are required by all companies. Although these assets do not generate revenue, they are essential part of business.

Along with tangible assets such as plant, machines, cars, furniture, computers etc., some balance sheets may also possess intangible assets such as patents, licences, brand value and others.

The asset turnover ratio, calculated as sales/fixed assets, indicates the efficiency of the assets created by the company in generating revenues.

In the above example, Fixed Assets are at Rs. 200.

Current Assets: Current Assets are those which can be converted into cash within a year. Inventory, trade receivables, investments, short term loans and advances and cash are all examples of current assets. Current assets analysis is important to understand the working capital situation of the company. A large level of inventory or trade receivables may mean capital tied up and the company may be paying a high cost for debt. Analysing the current assets relative to past trends and peer group companies will give insights into the working capital management of the company. Lower inventory days and trade receivables days augur well for the company.

In the above example, Current Assets are Rs. 50.

8.4 Basics of Cash Flows

Generating cash is critical for a firms' long term survival. P/L statement and Balance Sheet do not focus on cash flows since accounting is on accrual basis and not cash basis. Accrual basis of accounting means that sales are booked at the time of delivery irrespective of whether payment from the customer is received or no. Similarly, purchase is booked at the time of receipt of goods irrespective of whether payment to the supplier is made or no. This creates difference between the profits shows in the business and the actual cash with the business.

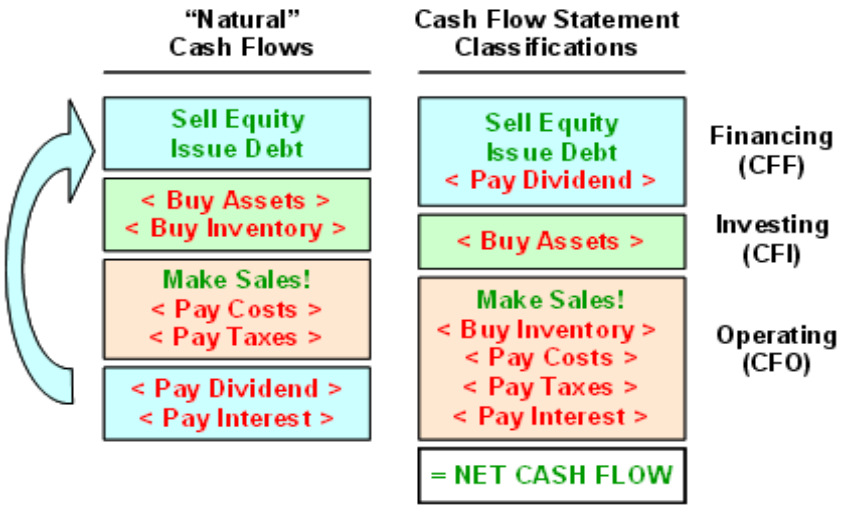
Let us take an example. If a business does all cash purchase of say Rs. 80,000 and cash sales of Rs. 100,000, there would be profit of Rs. 20,000 and business would be able to touch that cash as money has already come in. However, think of this business where purchase is done on cash

and sales is done on credit; the P/L statement would show a profit of Rs. 20,000 but the fact is that there is no money. Indeed, if the business is not able to collect the dues from its customers, there will be no profits and even the capital of the company, Rs. 80,000 is likely to be lost. Therefore, along with the P/L statement and Balance Sheet, the cash flows generated by a business also needs to be assessed. In absence of cash, while there may be profits, they would be more paper profits and not the real profits.

To understand the concept further, there are cash inflows and cash outflows in every business as money comes in and money goes out. For simplicity and understanding purpose, cash flows are broadly divided into following three categories:

- ***Operating cash flows*** – Cash flows from business operations (P/L items). Incoming cash is positive and outgoing cash is negative. The net profit of a company can be converted into the operating cash flow number by adding back non-cash expenditures such as depreciation and amortization and changes in account receivables and payables.
- ***Investing cash flows*** - Cash flows on account of assets (B/S items). Buying assets is negative cash flow and selling assets is positive cash flow.
- ***Financing cash flows*** – Cash flows on account of liabilities (B/S items). Borrowing money or issuing/expanding equity is positive cash flow and redeeming debt and/or equity is negative cash flow.

The following picture, taken from Investopedia, depicts the cash flow categorization in a neat manner:



If a business is continuously running negative operating cash flows for several years, there is an alarming signal of risk. A business, which is continuously running negative operating cash flows would need continuous doses of stimulus in terms of cash (borrowing or equity expansion) to

keep going. Needless to state that over a period of time, either it will turn into a positive operating cash flow business or die down in the absence of cash stimulus (when investors and/or lenders refuse to pump in further cash). Kingfisher Airlines had negative operating cash flows for years. Here are the financials of Kingfisher Airlines taken from moneycontrol.com:

Cash flows in Rs. Cr.					
	Mar '13	**Mar '12**	**Mar '11**	**Mar '10**	**Mar '09**
	12 mths	12 mths	12 mths	12 mths	12 mths
Net Profit Before Tax	**-4301.12**	**-3446.09**	**-1520.78**	**-2417.92**	**-2155.21**
Net Cash From Operating Activities	-1390.86	-885.55	-2.23	-1665.09	-645.78

The Airline was borrowing money to pay interest as EBIT was much lower than interest obligations for several years in the past. At a point in time, it stopped as lenders refused to pump in further cash and the business did not turn positive operating cash flow even after infusion of capital. It should be clear that no business can run on continuous expansion of borrowed money.

Whenever a business is expanding, it would need cash. Negative investing cash flows are financed through either positive operating cash flows or accumulated positive operation cash flows (bank balance) or positive financing cash flows (borrowing and issuance of equity). Businesses that depend excessively on borrowed funds for expansion have to be seen with caution. The assets that appear in the balance sheet may realize lower than their book value as shown in the B/S but the liabilities have to be met in total.

Some of the points to be kept in mind in case of cash flows are:

- Looking at net cash flows could be deceptive
- Each of the cash flow streams Operating, Investing and Financing have to be analyzed independently.
- The objective of cash flow analysis has to be to focus on sustainable and recurring cash flows
- Non-recurring / extraordinary items that impact the cash flows should be recognized and adjusted

8.5 Contingent Liabilities

Contingent liabilities are liabilities that may be incurred by an entity depending on the outcome of an uncertain future event. For example, a company may be fighting a court case, which may result into substantial loss for the company, if the case is lost. These liabilities are not recorded in a company's accounts and generally recorded in the notes to accounts. Prominent examples of contingent liabilities are:

- Outstanding lawsuits
- Disputes with Tax Authorities
- Guarantees provided

While most of the managements would always be positive and state that they don't see the liability settling against them, one is always better of looking at the quantum specially in comparison to the size of P/L statement and its Balance Sheet. If size of the contingent liabilities is large in comparison to the P/L statement and Balance Sheet of the business, one needs to exercise caution while analyzing the business.

Off-Balance Sheet Items:

Simply stating, any asset or liability that does not appear on a company's balance sheet is an off-balance sheet item. For example, loans taken are part of liability in the books of the company, operating lease, which is an alternative way of financing an asset is an off-balance sheet item. Contingent liabilities, as defined above, are also off-balance sheet items. Similarly, if a company has entered into a derivative contract to trade or hedge its position that will not appear on the Balance Sheet and would be covered as a note to accounts in the Annual Report. Given that existence of so many businesses worldwide has been threatened by the derivative transactions, it is critical for an analyst to analyze all the off-balance sheet items in great details.

While positive surprises in terms of off-balance sheet items are fine, negative ones are the risks and should be dealt with in a great details by the analysts.

Accounting Policies:

There are multiple ways to account for an item and it is critical for an analyst to know what methodology company has adopted to account for an item. For instance, for depreciation, companies may choose between straight line method of depreciation or the written down value method of depreciation. Accounting policies of the company, as defined in the Annual Report, would define how that item is treated by the company.

In other words, accounting policies are the way a company accounts for various items in P/L statement and Balance Sheet. Accounting policies are important for an analyst to understand as there are different ways of accounting for a single item and analysts should know how a particular business is treating that item. Companies are also required to mention clearly if there is any change in the accounting policy in comparison to previous year. If a company is continuously changing its accounting policies, may be company is trying to manipulate the financials.

Notes to Accounts:

Financial statements as defined above are – Profit and Loss accounts, Balance Sheet and Cash Flow Statements. Notes to Accounts provide detailed information on the items covered in the financial statements. Information in the notes include the accounting policies followed, the method for estimating the value of the assets in the balance sheet, basis for classification of assets, valuation of investments, method for recognizing revenues and booking costs, details of foreign currency transactions, changes if any in accounting policies, contingent liabilities and other information that may have a bearing in correctly interpreting the company's financial statements.

8.6 Basics of Taxation Affecting To Companies

Companies incorporated in India or wholly managed and controlled in India are taxed on the basis of income earned by them world-wide. Companies that are not resident in India, as defined above, are taxed only for the India-specific income. Corporate profits, computed after deducting business expenses and other specified items, are taxed at the applicable rate. The current rate of tax is 30% for Indian companies and 40% for foreign companies. A surcharge of 10% and education cess of 3% is also applicable. A surcharge of 5% applies if the income exceeds Rs. 10 million and 10% if it exceeds Rs. 100 million. A Minimum Alternative Tax (MAT) is applicable at 18.5% (plus surcharge and cess) if a company's tax liability is less than 18.5% of the book profit. Dividends paid by a company are subject to dividend distribution tax, currently at 15%.

The government may provide fiscal incentives to boost economic growth through lower tax rates or tax holidays or other similar incentives. For example, the deductions available on taxable income for expenses incurred for skill development project or agricultural extension project, installing plant and machinery over Rs. 1 billion, capital expenditure for setting up cold storage facilities for agricultural produce, developing affordable housing projects, expenses for scientific research and others.

Sometimes, differentiation in the tax policies such as taxation rate in a Special Economic Zone (SEZ) v/s. what a business pays outside the SEZ could create lots of differentiation among businesses. Analysts should understand the basic tax structures and how taxation can affect the businesses at a broad level.

8.7 Important Points to Keep In Mind While Looking At Financials

Financial statement analysis can be intimidating if the terminologies are not known, however, the same numbers become addictive if the language is understood.

Numbers can be made to look good by making assumptions or by creative accounting. Qualifications of auditors in notes to accounts (the fine print) are a very useful part of the annual report.

Change in accounting period can lead to confusion while comparing previous years' numbers. Similarly one off items can increase or decrease profits and if these are not studies properly, the entire analysis can change.

Consistent performance year after year is what is best for the investors. A company which continues to grow in sales, increase profits, increase Net-worth, reduce debt, improve margins and finally improve Return on Net-worth (RONW) for the investors is one which will create value over the long term.

8.8 Quality of Business in the Past through Quantitative Lenses

The financial performance numbers of a company, as presented in the financial statements, can be used to calculate ratios that give a snapshot view of the company's performance. The ratios of a company have to be seen in conjunction with industry trends and historical averages. This Financial Statement Analysis can be broadly classified into several categories as follows:

8.8.1 Profitability Ratios

Profitability ratios define how profitable the operations of the company are on per rupee of sales basis. It is evident that if the industry is very competitive and there are pricing pressures on the business, profitability will suffer. However, if the business is unique with significant entry barriers, or if it is an initial entrant in a sunrise industry profitability of the business would be high. A very high level of profitability will not sustain over a long period. With new entrants and competition, revenues and profits will moderate.

The profitability of a company can be evaluated at each level of P/L statement. The two main parameters of profitability are **EBITDA Margin and Net Profit Margin (NPM)** or **Profit After Tax margin (PAT margin)**.

EBITDA Margin: This ratio is useful in finding out the profitability of the company purely based upon its operations and direct costs. It is calculated as

EBITDA Margin = EBITDA/ Net Sales

A firm with a higher EBITDA margin, indicates that it is able to operate with greater efficiency than other peer group companies. The EBITDA margins are useful in identifying profitability trends in an industry since it is not affected by the depreciation policies, funding decisions and taxation rates of the companies. .

In our example EBITDA Margin is 80% (80/ 100).

PAT Margin: Shareholders of a business get their dues only at the end, i.e. after paying all stakeholders, including the government. Hence, they would like to know how much of the business generated by the company actually comes their way. This is found by calculating PAT Margin.

PAT Margin = PAT/ Net Sales

A firm with a higher ratio is seen as more efficient in managing costs and earning profits. A trend of increasing margins means improving profitability.

In our example, PAT Margin is 31.5% (31.5/ 100)

8.8.2 Return Ratios

While Profitability ratios give a sense of profitability per rupee of sales by the business, they do not communicate anything on the productivity of each rupee invested in the business. This part of allocation of capital and its productivity is captured through comparing profits with the capital employed in the business. Two important ratios to look at here are Return on Equity (ROE) and Return on Capital Employed (ROCE).

Return on Equity (ROE): This is the single most important parameter for an investor to start digging for more information about a company. ROE communicates how a business allocates its capital and generates return. An efficient allocator of capital would have high ROE and a poor quality of business would have low ROE.

ROE, sometimes also known as Return on Net-worth (RoNW), is calculated as

ROE = PAT/ Net-worth

Net-worth = Equity Capital + Reserves & Surplus

Higher the ROE, better the firm.

ROE is further decomposed into 3 steps, known as Du Pont Analysis:

PAT/ Net-worth = (PAT/ Net Sales) * (Net Sales/ Fixed Assets) * (Fixed Assets/ Net-worth)

ROE = Net Profit Margin * Asset Turnover * Equity Multiplier

In other words, RoE considers the operating efficiency of the firm, the efficiency with which the assets are used by business to generate revenues and the financial leverage used by the business.

In our example, ROE = 31.5 (PAT)/ 128 (Net-worth) = 24.61%.

ROE using (Du Pont Analysis)

24.61% = (31.5/ 100) * (100/200) * (200/ 128) = 31.5% * 0.5 * 1.5

In this analysis, we can see that the Asset Turnover for this company is slightly low and ROE is mostly being generated by high profit margins and by using debt funding.

Return on Capital Employed (ROCE): This ratio uses EBIT and calculates it as a percentage of the money employed in the firm by way of both equity and debt.

ROCE = EBIT/ Capital Employed

Capital Employed = Total Assets – Current Liabilities or Total Equity + Total Debt

Higher the ratio, better the firm since it is generating higher returns for every rupee of capital employed. Investors can use this to analyse the returns of companies with different sizes in the same industry.

In our example, we have ROCE of 60/ (250 – 22) = 26.32%

8.8.3 Leverage Ratios

A high level of debt used in funding the operations can be risky for the business, especially in an economic downturn when revenues and profitability reduce. Leverage Ratios can be used to analyse the extent of leverage used by a business and its ability to meet the obligations arising from them. Two important parameters here are Debt / Equity ratio and Interest coverage ratio.

Debt/ Equity (D/E): As discussed earlier, high levels of debt in a business can prove to be detrimental for a company. In absence of its ability to pay to the lenders, business may have to face bankruptcy. When businesses create assets aggressively out of borrowed money, it could be quite dangerous if the assets are unable to generate the expected revenues and profitability. The liability will still have to be met.

It would be prudent for investors to avoid companies with extremely high levels of debt. On a most conservative basis, a D/ E of 1 or less should be considered as the benchmark, and then depending upon the industry, track record of the company, capital required, project details, should a decision be taken. This ratio is defined as:

D/ E Ratio = Long Term Debt/ Net-worth

In our example, the D/ E Ratio would be 100/ 128 = 0.78x.

Interest Coverage Ratio: Companies having high debt need to pay high interest as well. Whether a company is headed for a trouble can be simply seen by comparing its earnings with the interest (we are not talking about principal repayment yet). This ratio, popularly known as Interest Coverage Ratio, tells us how many times the earnings of the business is vis a vis its interest obligation. This is simply defined as:

Interest Coverage Ratio = EBIT/ Interest Expense

If this ratio is high, clearly, business is in comfortable zone. The ratio will be less than one or negative in some businesses, which means that earnings are less than interest or earnings are negative and interest obligations exist. As these businesses would be either borrowing money or infusing equity to run the show, these businesses may come into significant problems if they don’t turn around soon. Kingfisher Airlines is one such example.

8.8.4 Liquidity Ratios

It is important to see whether a business is able to honour its obligations as and when they arise. Two simple measures for the same are current ratio and quick ratio:

Current Ratio: This ratio measures the company's liquidity situation by comparing its current assets with its current liabilities. A ratio of more than 1 means that the company has current assets more than its current liabilities. This ratio is also known as Working Capital Ratio.

Current Ratio = Current Assets/ Current Liabilities

This ratio measures the ability of the company to meet its short-term liabilities. The elements that constitute the working capital of the company, trade receivables, inventory, trade payables, form an important component of this ratio. A high inventory of finished goods may mean that the sales are slowing down, high raw material inventory may mean poor production planning. High trade receivables will indicate that the company is selling on credit and not able to realize cash from its debtors. On the other hand, high trade payables may indicate the strength of the company in getting best credit terms from its suppliers. There are companies which take cash on sales and make payments on credit. Such a situation will result into a current ration less than 1, however, this is not a red flag. In fact, it is a very good situation in which the company's working is funded by the customers.

A high ratio may indicate poor use of working capital while a very low ratio may point towards deeper analysis.

In our example, the Current Ratio = 50/ 22 = 2.27.

Quick Ratio: This is a more stringent version of the liquidity ratio as it does not consider assets, which although current in nature, but cannot be converted into cash immediately. Prominent example of such current assets is inventories. Thus,

Quick Ratio = (Current Assets – Inventories)/ current liabilities

Accounts receivable, cash, investments in liquid funds, are all included in calculating quick ratio.

Higher the ratio better the liquidity, but lesser will be the returns as cash is not a great source of generating returns.

8.8.5 Efficiency Ratios

It is important to see whether a business is efficient in its operations. Efficiency would also help business improve its capital allocation and so the profitability and return ratios. Some simple parameters of efficiency in a business are defined below.

Accounts Receivable Turnover: This ratio indicates how fast company converts its sale in to cash. Higher the ratio, better the firm, as it means that very small portion of its revenues are in

the form of credit. On the other hand, if the ratio is low, it means that the company is giving too easy credit or may be even facing difficulties in recovering money from its distributors/clients.

Accounts Receivable Turnover = Revenue/ Accounts Receivable

Accounts Payable Turnover: This ratio indicates how much of a company's purchases are on credit. This ratio is calculated as:

Accounts Payable Turnover = Purchases/ Accounts Payable

As can be seen from the formula, if the payable is high (denominator), the ratio will be low. This means that the company is running long credit periods with its suppliers. It is difficult to conclude anything just looking at this number because long credit periods with its suppliers could be because it has good bargaining power with its suppliers or it does not have the money to pay to them. While bargaining power of company may let it take long credits from its suppliers, in long run, it may not be good as suppliers would not like the situation. Indeed, good companies generally focus on paying on timely basis as much as they focus on receiving money on timely basis.

Asset Turnover: This ratio indicates how many times assets of the business are churned/put to use to generate revenues for the business. Clearly, if assets are lying idle, that is not good for the business as capital is deployed but it is not generating revenue. On the other hand, if asset is continuously churned/put to use to produce goods and services, it would improve the revenues and the profits. Therefore, higher the ratio, better the firm.

Asset Turnover = Net Sales/ Total Assets

This ratio is also used in Du Pont Analysis, which is used to decompose the ROE to get even better understanding of the company's drivers.

Inventory Turnover: This ratio gives the number of times inventory is rolled over by a company, hence obviously, higher the ratio, better is the business. Inventory, if not converted into sales fast, would mean money is locked in the business. Also, perishable goods may start deteriorating if inventory is not turned into sales fast. This ratio would be high for FMCG companies whereas low for capital goods companies.

Inventory Turnover = Sales/ Inventory

8.9 Peeping in to future with caution

Looking into historical financials and understanding the ratios defined above would give us a great sense on how is the business organized and what are the drivers of the business. Analysts use the historical relationship between financial parameters to project financials for the businesses. Many a times, these projections are reduced to simple extrapolation of historical financials without enough ground work. Analysts must appreciate that future of the businesses could be significantly different from their past. For example, Suzlon faced tremendous competition from both domestic and offshore competitors starting middle of 2000 while it was the only wind turbine manufacturer before that and had great pricing power. Projecting financials of Suzlon in the middle of 2000 purely based on its historical exploration would have been a blunder.

Analysts must spend time thinking and analyzing how the future of business is going to be different from its past in view of changing dimensions of the business. Then, based on assumptions, projections may be drawn.

While on this topic of projections, it may be interesting to quote some great minds - Warren Buffett, Charlie Munger and Graham and Dodd on the subject.

"I have no use whatsoever for projections or forecasts. They create an illusion of apparent precision. The more meticulous they are, the more concerned you should be. We never look at projections but we care very much about, and look very deeply, at track records. If a company has a lousy track record but a very bright future, we will miss the opportunity." - Warren Buffett

"In my opinion, projections do more harm than good. They are put together by people who have an interest in a particular outcome, have a subconscious bias, and its apparent precision makes it fallacious. They remind me of Mark Twain's saying, 'A mine is a hole in the ground owned by a liar." - Charlie Munger

"While a trend shown in the past is a fact, a 'future trend' is only an assumption. The past, or even careful projections, can be seen as only a 'rough index' to the future." - Graham and Dodd

8.10 Peer Comparison

Looking into a company's financials helps to understand the past performance of the company. It may also be interesting to see a company's performance vis-à-vis other participants/peers in the industry to understand its competitive position. All the ratios as defined above and in other units on valuation, when compared across companies of the same sector, can give a good idea

of where the company stands vis-à-vis its peers. Various databases provide us a quick snapshot of all these numbers of a company vis a vis its peers. Peer comparison is critical for analysts to look into while making any research report.

8.11 History of Equity Expansion

Equity dilution is an outcome of the issue of additional shares by a company. This increase in the number of shares outstanding can result from a primary market offering (including an initial public offering or Follow on Offering or Rights issue), employees exercising stock options, or by conversion of convertible bonds, preferred shares or warrants into stock. Equity dilution has an impact on the existing shareholders' percentage holding in the company, which in turn affects the profits that accrues to them. .

As rights issue offer equal chance to the existing shareholders to maintain their holding percentage, rights may not be that big a concern for the investors from dilution point of view. Similarly, bonus issues should not worry investors at all as money from one head "Reserves and Surplus" is moved to another head "Equity Capital" without any economic impact on the existing shareholders. Much more to this subject is covered in the dedicated unit dealing with corporate actions.

Companies financing their growth with strong internal accruals are anytime better and safer bets than those raising money regularly from outsiders. Analysts should analyze the details of capital expansion over last several years and their impact on the value for shareholders.

8.12 Dividend and Earnings History

Dividends and earnings track record of a business is a critical aspect for analysts to analyze. Generally, companies maintain their dividend levels until something drastically different happens with the businesses. Much more to this subject is covered in the dedicated unit dealing with corporate actions.

8.13 History of Corporate Actions

Corporate actions such as dividends, bonuses, splits and rights issues affect the company's share price in various ways. Much more to this subject is covered in the dedicated unit dealing with corporate actions.

8.14 Ownership and Insiders' Sales and Purchase of Stocks in The Past

Owners, being closest to the business, have most information about the nuances of the business. They are better informed of the performance of the company. They also act in the market (buy/sell shares of the company) under the defined guidelines of SEBI.

While analyzing a business, analysts may get good insight by looking at the actions of the promoters/insiders in the market. It is interesting to quote Peter Lynch on the subject – "*insiders can sell for a variety of reasons and it not necessarily ring alarm bells, but if insiders are buying, then there can be only one reason that the company is likely to make huge profits in future*".

Sample Questions

1. **Which of the following items are found in an income statement?**
   a. Accounts Receivables
   b. Long term debt
   c. Inventory
   d. None of the above

2. **Which section in the Cash Flow statement will provide the information about the amount of funds that a company borrowed during the preceding year?**
   a. Operating Cash Flows
   b. Investment Cash Flows
   c. Financing Cash Flows
   d. Total Net Cash Flows

3. **Which of the following measures the ability of the company to satisfy its short term obligations as and when they come due?**
   a. Current Ratio
   b. High Return on Equity
   c. High Return On Capital Employed
   d. Inventory Turn Over Ratio

4. **Price to earnings ratio of a business is 10, price to book value ratio of this business is 5, book value per share is Rs. 15 and outstanding number of shares are 10,000, what would be the return on equity of this business?**
   a. 25%
   b. 75%
   c. 50%
   d. 20%

CHAPTER 9: CORPORATE ACTIONS

LEARNING OBJECTIVES:

After studying this chapter, you should know about the following corporate actions and its implications:

- Dividends
- Rights Issue
- Bonus Issue
- Stock Split
- Mergers and acquisition
- Share Consolidation
- Buyback
- Delisting of shares
- Share swap

9.1 Philosophy of Corporate Actions

A company initiates several actions, apart from those related to its business, that have a direct implications for its stakeholders. These include sharing of surplus with the shareholders in the form of dividend, changes in the capital structure through the further issue of shares, buy backs, mergers and acquisitions and delisting, raising debt and others. In a company that has made a public issue of shares, the interest of the minority investors has to be protected. Corporate actions are regulated by provisions of the following:

- Provisions of the Companies Act, 2013,
- Relevant regulations of SEBI, and
- Terms of the listing agreement entered into with the stock exchange

All corporate actions therefore need to follow the requirements prescribed by these regulations. This includes giving notice to the regulators, stake holders and following the disclosure norms laid down in the applicable clauses.

Corporate benefits and actions, as defined above, apply to all investors who appear in the register of members, if the shares are held in physical form or investors whose names appear in the register of beneficial owners maintained by the depository, in case of dematerialized shares. In order to determine this, the company announces a record date or book closure period and investors whose names appear on the records on this date become eligible shareholders to receive notice of the relevant corporate action and benefit.

There are several corporate actions possible and some of them are defined below:

9.1.1 Dividend

Post-tax Profits in a business belong to the shareholders and a company can broadly do two things with those profits – retain them for investment in the business, or return to the shareholders. If a company choses to return money to all shareholders in equal proposition, it is said to have 'declared a dividend'. In practice, companies distribute part of the profits and retain part of the profits in the business. The proportion of distribution and retention of profits will depend upon the opportunities available for ploughing back the profits into the business, nature of management, expectation of shareholders and ultimately the availability of cash in the business to distribute to the shareholders. A company may declare 'interim dividends' during the financial year and a 'final dividend' at the end of the year. A company has to pay dividends within 30 days of its declaration.

SEBI has mandated that listed companies shall declare dividends in rupees terms on per share basis as against the earlier practice of declaring dividends as a percentage of the face value. This is to avoid confusion among investors while comparing dividend on various shares of different face values.

For example: if 50% dividend is declared by two companies 'A' and ‘B’ with different face values of Rs. 2 and Rs. 10 respectively, an investor in company ‘A’ will receive Re. 1 as dividend as against Rs. 5 in the case of company ‘B’. Dividends received by the investors in two companies are different even though the percentage is the same because the face value of the shares is different. In the interest of the investors, company ‘A’ is now required to declare the dividend as Re. 1 per share while company ‘B’ will declare the dividend payable as Rs. 5 per share.

Historical dividend track record of a company may be seen from Payout ratio, which is calculated by dividing the company's dividend per share by earnings per share. In India, companies declaring or distributing dividend, are required to pay Dividend Distribution Tax in addition to the tax levied on their income. Dividend received is exempt in the hands of the shareholder's, in respect of which Dividend Distribution Tax has already been paid by the company.

9.1.2 Rights Issue

When a company needs additional equity capital, it has two choices – ask more money from existing shareholders or go for fresh set of investors. If company chooses latter i.e. issues shares to fresh set of investors, proportionate holding of existing shareholders gets diluted. For example, a company may have 10 lakhs shares of Rs.10 each, amounting to an issued and paid-

up capital of Rs. 1 crore. If it issues another 10 lakhs shares to fresh set of investors, to increase its capital, the proportion held by existing shareholders will come down by half, as the issued and paid up capital has doubled. This is called as dilution of holdings. To prevent this, Companies Act requires that a company which wants to raise more capital through an issue of shares must first offer them to the existing shareholders and such an offer of shares is called a rights issue.

Subscribing to the rights issue is choice and not compulsion for investors. They may buy shares offered to them under rights issue or let the choice expire without any action or may choose to transfer their rights/entitlement to another person for consideration (sell) or without consideration (under love and affection). This is called renunciation of rights. Rights entitlements also get traded on the stock exchange for a defined period.

Shares under rights issues are generally offered at a discount to the prevailing market prices (Logically also, if price under a rights issue is higher than market price of stock, investors would be better off buying shares from the market without subscribing to the issue). Let us assume a shareholder 'A' has 10 shares of a company whose share price is Rs. 100. If the company is in further need of capital, it could get this capital from its existing shareholders by offering shares at a discounted price. The number of discounted shares a shareholder can buy depends on the number of shares held by him and the ratio offered under rights issue.

For example: if the company issues 1-for-2 rights issue at Rs. 70 per share, shareholder ‘A’ will have right to buy one share for every two shares held by him at Rs. 70. As ‘A’ has 10 shares, he can buy 5 more shares at Rs. 70. In practice, companies allow shareholders to apply for additional shares beyond their entitlement because some shareholders may neither apply for shares under their entitlement nor transfer their rights to others and those shares may be available for issuance to these shareholders who desire additional shares.

A rights issue of shares must follow all SEBI’s regulation on issue of shares. A listed company making a rights issue shall fix a record date to determine the eligibility to the rights. The company must issue a letter of offer giving details of the issue including the purpose for which funds are being raised. The draft letter of offer must be filed with SEBI. An abridged letter of offer must be dispatched to all investors at least three days before the issue opens. Investors can also apply on a plain paper if they do not receive the application form. A rights issue is open for subscription for a minimum period of 15 days and a maximum period of 30 days.

As a result of rights issue, total number of outstanding shares go up with a corresponding increase in the cash in the asset side of the balance sheet. If all shareholders subscribe to their

full entitlements/rights, their proportionate ownership remains unchanged and the number of shares held by them goes up.

9.1.3 Bonus Issue

A bonus issue, also known as equity dividend, is an alternative to cash dividend. Bonus shares are issued to the existing shareholders by the company without any consideration from them. The reserves lying in the books of the company (shareholders' money) gets transferred to another head i.e. paid-up/subscribed capital. The shareholders do not pay anything for these shares and there is no change in the value of their holdings in the pre and post-bonus stages. The issuance of bonus shares is more to influence the psychology of investors without any economic impact.

The entitlement to the bonus shares depends upon the existing shareholding of the investors. A bonus issue in the ratio of 1:3 entitles a shareholder for 1 bonus share for every 3 shares held by them. The company makes the bonus issue out of its free reserves built from genuine profits. Reserves built from revaluation of assets are not allowed to be considered for making a bonus issue. A company cannot make bonus issue if it has defaulted on payment of interest and/or principal on any debt security issued or any fixed deposit raised.

Issuance of bonus shares is termed as capitalization of reserves. As total number of shares go up without any economic change in the profit and loss statement or balance sheet, per share data (earning per share, book value per share, market price per share etc.) witnesses immediate deterioration. However, as shareholders' proportionate ownership remains unchanged and the number of shares held by them go up, at overall ownership level, there is no negative impact to the shareholders.

For example: If shares of a company were trading at a price of Rs. 1000 per share prior to bonus, post bonus on 1:1 basis, fair price of share is likely to come down to Rs. 500 per share to maintain post bonus market value of a holding equivalent to its pre bonus market value. Therefore, mathematically, the value of the investor's holding pre bonus at Rs. 1, 00,000 (100 shares x Rs. 1000) remains the same Rs. 1, 00,000 (200 shares x Rs. 500) post bonus. Actual market price of share post bonus will be around Rs. 500 (not exactly at of Rs. 500) as it will depend on market factors of demand and supply.

9.1.4 Stock Split

A stock split is a corporate action where the face value of the existing shares is reduced in a defined ratio. A stock split of 1:5 means split of an existing share into 5 shares. Accordingly, face value of shares will go down to 1/5th of the original face value. For example, if an investor holds

100 shares of a company with a face value of Rs. 10 each, a stock split in the ratio of 1:5 will increase the number of shares held by him to 500 but the face value of each share will go down to Rs. 2. From the company's perspective, there is no change in its share capital since an increase in the number of shares is offset by a fall in the face value and resultant multiplier of face value and outstanding no. of shares remains the same.

Companies consider splitting their shares if prices of their shares in the secondary market are seen to be very high restricting the participation by investors. As price per share comes down post-split, share split leads to greater liquidity in the market.

Similar to bonus, split is also a book entry resulting in increased number of outstanding shares in the books of company with reduced face value without any economic benefit whatsoever to the shareholders. We may say that share split is also to influence the psychology of investors (of reduced market price per share) and to impact liquidity in the market place without any economic benefit to the shareholders. As the total number of shares go up without any economic change in the Profit and Loss statement or Balance Sheet, per share data (earning per share, book value per share, market price per share etc.) witnesses immediate deterioration. However, as shareholders' proportionate ownership remains unchanged and number of shares held by them go up, at overall ownership level, there is no negative impact to the shareholders.

For example, SBI initiated a stock split of its equity shares from a face value of Rs. 10 to Re 1. A shareholder holding 1 share of a face value of Rs. 10 will now hold 10 shares each with a face value of Re. 1. The stock that was trading in the markets at over Rs. 2700 at the time of the announcement traded post-split at around Rs. 295. The value of the shareholder's holding was around Rs. 2700 (1 share x Rs. 2700) prior to the stock split. Post the split, the value of the holding is Rs. 2950 (10 shares x Rs. 295). The market price after the split will depend upon the market forces of demand and supply.

9.1.5 Share Consolidation

Share consolidation is the reverse of stock split. In a share consolidation, the company changes the structure of its share capital by increasing the par value of its shares in a defined ratio and correspondingly reducing the number of shares outstanding to maintain the paid up/subscribed capital. A stock consolidation of 5:1 means consolidation of 5 existing share into 1 share. Accordingly, face value of shares will go up 5 times of the original face value and no. of outstanding shares will become one fifth the original number.

For example, if an investor holds 500 shares of a company with face value of Rs. 2 each, a stock consolidation in the ratio of 5:1 will reduce the number of shares held by him to 100 but the face value of each share will go up to Rs. 10. From the company's perspective, there is no

change in its share capital since decrease in the number of shares is offset by corresponding increase in the face value.

Companies consider consolidating their shares if prices of their shares in the secondary market are seen to be very low effecting the perception of investors. An increase in the price per share post- consolidation, leads to better perception among the market participants about the company's prospects.

Similar to bonus and split, share consolidation is also a book entry resulting in reduced number of outstanding shares in the books of company with increased face value without any economic benefit whatsoever to the shareholders. We may say that share consolidation is also to influence the psychology of investors without any economic benefit to the shareholders. As total no. of shares go down without any economic change in the Profit and Loss account or Balance Sheet, per share data (earning per share, book value per share, market price per share etc.) witnesses immediate improvement. However, as shareholders' proportionate ownership remains unchanged and no. of shares held by them go down, at overall ownership level, there is no positive impact to the shareholders.

For example: If shares of a company were trading at a price of Rs. 5 per share prior to consolidation, post- consolidation on 5:1 basis, fair price of share is likely to become Rs. 25 per share to maintain post- consolidation market value of a holding equivalent to its pre-consolidation market value. Therefore, mathematically, value of the investor's holding pre-consolidation Rs. 2,500 (500 shares x Rs. 5) remains the same at Rs. 2,500 (100 shares x Rs. 25) post- consolidation. Actual market price of share post- consolidation will be around Rs. 25 (not exactly at Rs. 25) as it will depend on market factors of demand and supply.

9.1.6 Merger and Acquisition

Mergers, acquisitions and consolidations are corporate actions which result in a change in the ownership structure of the companies involved. In a merger, the acquirer buys up the shares of the target company and it is absorbed into the acquiring company and ceases to exist. The assets and liabilities of the target company are taken over by the acquirer. In an acquisition or takeover, the acquiring company acquires all or a substantial portion of the stock of the target company. Both entities typically continue to exist after the acquisition. In a consolidation, companies combine together to form a new company and the merged companies cease to exist.

Following are some of the motives behind M&A activities:

- ***Synergy***: Each company may have distinct efficiencies that when combined together may result in greater economic benefits. The combined entity can benefit from economies of scale, forward and backward integration and expanding the market for their products and services.
- ***Increased revenue and market share***: If two competitors go through M&A, it would result in increased revenue and market share for the acquiring entity.
- ***Geographical or other diversification***: Acquiring Company (ies) in different geography or complimentary business space may offer significant competitive advantage to the acquirer.
- ***Taxation***: A profitable company can buy a loss making company to enjoy tax shield against the losses of the target company.

The shareholding pattern of a listed company may change due to a substantial acquisition of shares and voting rights by an acquirer and persons acting in concert with the acquirer. SEBI (Substantial Acquisition of Shares and Takeover) Regulations, 1997, provide relevant triggers and requirements for an acquirer and offer an opportunity to public shareholders to exit from the company in such situations, if they choose to do so.

9.1.7 Loan Restructuring

Loan or debt restructuring is a mechanism available to companies in financial distress who are unable to meet their obligations to their lenders to restructure their debt by modifying one or more of the terms of the loans. This may include the amount of loan, rate of interest, the mode of repayment: funds and/or equity in the company, and the term of the loan and so that the repayment obligation is within the payment capacity of the borrower. A restructuring exercise is to the advantage of the borrower and the lender. The borrower is given a way to repay the loan that is feasible given the current state of the business and not be declared a defaulter. The company is now able to focus on building back its business and repairing the balance sheet. The lender can expect some repayment from a loan that would otherwise have to be written off as a bad debt.

The process of debt restructuring involves analyzing the debt position of the company, meeting with the lenders, providing information on the current and future financial position of the company and coming up with a workable repayment plan. The lenders have to be provided a concrete business plan on how the company plans to generate the revenues required to meet its obligations under the new terms as well as meet the financial needs of the business.

9.1.8 Buy Back of Shares

A company may deploy excess cash on the balance sheet in various ways. It may use the money to expand business and grow or reduce its liability by paying back/reducing its borrowings, if

any, and/or to distribute to the shareholders. If it chooses the third option, management needs to choose between homogenous distribution of this money among all shareholders through dividend or it would offer a choice to the shareholders to have the money through selling their shares back to the business or in kind in terms of enhanced value of each share in terms of Earning Per Share (EPS) and Book Value Per Share (BV).

Motives of buy back of shares could be multiple as follows:

- To give a value boost to the stock if it is seen as undervalued.
- Excess cash and lack of profitable investment opportunities.
- Buyback as a confidence building measure.
- Buyback as a defensive strategy against a potential takeover.
- Buyback to reduce equity and resultantly increase the leverage in the company.
- Buyback to diffuse the impact of dilution in promoters' holding on account of say Employee Stock Option Plans (ESOPs).

While every management talks about the positive impact of buyback on minority shareholders, it is very difficult to ascertain management intention on buyback of shares.

Buyback of shares can be done only out of the reserves and surplus available with the company. The shares bought back are extinguished by the company within stipulated time frame and that leads to a reduction in its share capital. To be eligible for a share buyback, a company should not have defaulted on its payment of interest or principal on debentures/fixed deposits/any other borrowings, redemption of preference shares or payment of dividend declared.

The shares can be bought back using the tender method by making an offer to existing shareholders on a proportionate basis or from the open market through a book building process or through the stock exchange or from odd lot holders. The company needs to pass a special resolution specifying the timeframe for buy back and maximum price at which the buyback will be made.

As buyback of shares results in the reduction of outstanding shares. Even if there is no change in the P/L, it would result in increased EPS for post buy back shareholders. These shareholders may also enjoy higher dividend on each of their shares. Assuming the market value of shares based on earnings remains same pre and post buyback, as it is to be spread over smaller lot now, market value per share goes up.

9.1.9 Delisting of Shares

Delisting of shares refers to the permanent removal of the shares of a company from being listed on a stock exchange. Delisting may be compulsory or voluntary. In a compulsory delisting, the shares are delisted on account of non-compliance to regulations and the clauses of the listing agreement by the company. In a voluntary delisting, the company chooses to get the shares delisted and go private. The motives may range from regulatory reporting complexities and compliance overhead to mergers and acquisitions and sometimes to have freedom to execute a changed strategy. Any voluntary delisting has to happen as defined in the regulations by SEBI. No minority shareholder can be forced to exit at the time of delisting of shares from the stock exchanges. Post delisting, any such shareholder would continue to be a shareholder in an unlisted business.

9.1.10 Share Swap

Swap, simply means, exchange of something. Accordingly, share swap means exchanging one set of shares with another set of shares. Term share swap is often used during a merger or acquisition of a company when acquiring company uses its own stock as cash to purchase the business. Each shareholder of the acquired company receives a pre-determined amount of shares from the acquiring company. Before the swap occurs each party must accurately value its company so that a fair swap ratio can be calculated.

Sample Questions

1. **When companies give new shares to their existing shareholders without any consideration, it is known as _____.**
   a. Special dividend
   b. Interim dividend
   c. Stock dividend
   d. Cash dividend

2. **Companies Act requires that a company which wants to raise further capital through an issue of shares must first offer them to the existing shareholders and such an offer of shares is known as _____.**
   a. Bonus Issue
   b. Rights Issue
   c. Public Issue
   d. Preference Issue

3. **Changing the structure of share capital of a company by increasing the par value of its shares in a defined ratio and correspondingly reducing the number of shares to maintain the paid up/subscribed capital is known as _____.**
   a. Stock Split
   b. Spin off
   c. Share Consolidation
   d. Share swap

4. **Delisting of shares refers to the _____ removal of the shares of a company from being listed on a stock exchange.**
   a. Permanent
   b. Temporary
   c. Voluntary
   d. None of the above

CHAPTER 10: VALUATION PRINCIPLES

LEARNING OBJECTIVES:

After studying this chapter, you should know about:

- Need for business valuations
- Valuation Principles
- Different types of business valuation models
- New valuation parameters

10.1 Difference Between Price and Value

Mr. Seth Klarman, a known value investor stated *"In capital markets, price is set by the most panicked seller; value, which is determined by cash flows and assets, is not. This is both the challenge and the opportunity of investing: to carefully sift through the markets to find the greatest divergence between price and value, and to concurrently avoid the extreme emotions of the crowd and, indeed, to take a stand against them."* **Warren Buffett** is also known to state frequently *"Price is what you pay and Value is what you get."*

Price and value are two different concepts in investing. While price is available from the stock market and known to all, value is based on the evaluation and analysis of the valuer at a point in time. There is no formula or method to put to throw a precise number on valuation of an asset. There are uncertainties associated with the inputs that go into the valuation process. As a result, the final output can at best be considered an educated estimate, provided adequate due diligence associated with valuing the asset has been complied with. That is the reason, valuation is often considered an art as well as a science. It requires the combination of knowledge, experience and professional judgment in arriving at a fair valuation of any asset.

10.2 Why Valuations are required

While purpose of carrying out valuation could vary from person to person, some of the reasons for carrying out valuations of assets/businesses/liabilities are as follows:

- Buying a business as part of investment exercise
- Selling a business as part of investment exercise
- Mergers and Acquisitions
- General sense of value of business to owners

- Fair treatment to different set of stake holders in case of equity swap
- Accounting, taxation and other regulatory and legal requirements

Whatever may be the objective of valuation, the purpose of valuation is to relate price to value and estimate if it is fairly priced, over-priced or under-priced. Given the limitations in the valuation process, valuers typically present multiple scenarios that reflect the effect of a change in the primary variables on the output value.

10.3 Sources of Value in a Business – Earnings and Assets

Warren Buffett stated *"There are only two sources of value in a business - Earnings and Assets."* Any asset, whether a financial asset such as a stock or a bond, or a real asset generates two streams of cash flows - periodic earnings and a final inflow on sale of the asset. In case of bonds, coupons produce earnings and redemption/sale of bond in the market produces one-time cash flow. Equities also produce earnings in the form of dividends and then one time cash flows on sale. Real estate provide rental income and an appreciated capital value on sale.

Businesses are established for the same reason: to generate cash flows in the form of earnings and the potential to realize cash flows from the sale of tangible and intangible assets if earnings are not sufficient, or they die down and owners proceed to collect their money from liquidation of business/assets.

Interestingly, lenders also think the same way. Lender will first ensure that the business will be able to generate the cash flows to meet its obligation before making the lending. The collateral offered is not the primary consideration in their decision-making and it is only a fall back mechanism to recover their money if their cash flow estimates prove wrong. They want borrowers to pay from their cash inflow streams.

It is also important to note that the capability of the business assets to pay up all liabilities and settle the equity holders, is always doubtful. Assets may be worth a lot less than what they appear for in the balance sheet. But, the outstanding liabilities have to be settled in full.

10.4 Discounted Cash Flows Model for Business Valuation

Consider a bond on offering which generates 9% as interest per annum and gets redeemed at the end of 10^{th} year on its face value of Rs. 100,000. Current prevailing interest rates (or expected return by investors) in the economy are also 9% for this maturity and credit quality. What would be the value of this bond today?

The value of the bond is the present value of all the future cash flows discounted at prevailing interest rates of 9%. As both coupon and expected rate (discount rate) are same, it would turn out to be face value viz Rs. 100,000. If expected rate of return by investors is higher (lower) than 9%, then bond would have value less (more) than Rs. 100,000. It is simple mathematics based on present and future value computations*.

(*Readers are advised to revise basics of present and future value computations before going ahead on this chapter.)

This is an example of discounted cash flows model for bond valuation. Actually, every asset or liability is priced the same way. Assets are acquired at a cost and the expectation is for these assets to generate a combination of earnings and/or capital gains (on sale of assets). If the bond is replaced with equity, the coupons will be replaced with dividends and redemption value by expected sales proceeds from sale of equity. However, in case of bonds, both quantum of cash flows and their timings were known with certainty, in case of equity quantum of cash flows (dividends or sales price) and their timings are unknown and uncertain.

The concept of valuing an asset based on its cash flows can be extended to valuing businesses based on their earnings (profits or to be more precise cash flows) and terminal value (one time sales proceeds from assets). While, the discounted cash flows models are used to value businesses, these valuations come with significant error of judgment because of the inability to measure quantum and timings of future cash flows with certainty. These models could also be very sensitive to some input factors.

Conceptually, discounted cash flow (DCF) approach to valuation is the most appropriate approach for valuations when three things are known with certainty:

- Stream of future cash flows
- Timings of these cash flows, and
- Expected rate of return by the investors (called discount rate).

Once these three pieces of information are available, it is simple mathematics to find the present value of these cash flows which a potential investor in that instrument would be willing to pay today to receive the expected cash flow stream over a period of time.

In valuing a business, the cash flows (outflows and inflows) at various stages over its expected life is considered. A rational way to find the value of a business may be to first find the inflows over outflows (called Free Cash Flows – FCFs) at different points in time and then bringing them to today (find present Value – PV) at an appropriate rate of return (Discount Rate - DR). This is called Discounted Cash Flow (DCF) method to value a project or a business/firm. The two

principal factors that drive the valuation of a firm using DCF are estimating the expected cash flows and the second is the determination of the rate used to discount these cash flows. The value estimated using the DCF can vary across analysts if there are differences in estimating these two factors.

There are two ways to look at the cash flows from a business. One is the free cash flows to the firm (FCFF), where the cash flows before any payments are made on the debt outstanding are taken into consideration. This is the cash flow available to all capital contributors-both equity and debt. The second way is to estimate the cash flows that accrue to the equity investors alone. Interest payments on debt is deducted from the FCFF and net borrowings added to it to arrive at the free cash flows for equity (FCFE). It is to be noted that the cash flows to the equity investors is not taken to be the dividends alone. It is extended to include the residual cash flows after meeting the obligations to the debt holders and dividends to preference shareholders. FCFF may be used for valuation if FCFE is likely to be negative or if the capital structure of the firm is likely to change significantly in the future.

FCFF is computed as:

Earnings Before Interest & Tax (EBIT) less Tax plus Depreciation & Non-cash charges less Increase (Decrease) in working capital less Capital Expenditure Incurred (Sale of assets)

FCFE is computed as

FCFF Less Interest plus Net borrowing

Apart from depreciation, other non-cash charges include amortization of capital expenses and loss on sale of assets, which are added back. Gains on the sale of assets is deducted from the FCFF and FCFE calculations.

Valuation requires a forecast of the cash flows expected in the future. This can be done by applying the historical growth rate exhibited by company or a rate estimated by the analysts based on their information and analysis. A more robust way is to look at the internal determinants of growth, namely, the proportion of earnings ploughed back into the business and the return on equity that it is expected to earn. The growth rate can be calculated as the product of the retention rate and the return on equity. A firm may have a period of high growth in revenues, profitability, capex and other performance parameters and then stabilize to a steady growth.

Since equity is for perpetuity and it is not possible to forecast the cash flows forever, the practice is to calculate a terminal value for the firm once the high growth period is over. The

terminal value may be calculated using the perpetuity growth method where the cash flow is expected to grow forever at a steady though modest rate once the high growth period is over. The average long term GDP growth rate or inflation rate is a good proxy for this rate. The terminal value is calculated by multiplying the cash flow for the last year of the high growth period by (1+ Growth rate) and dividing the resultant value by (Discounting rate- Growth rate).The other method is to calculate the terminal value by applying a multiple to a parameter such as the EBITDA at the end of the high growth period. The multiple is decided based on that of comparable firms. The terminal value is added to the cash flows for the growth or projection period, and then discounted to the present value.

The discount rate used in the DCF valuation should reflect the risks involved in the cash flows and therefore the expectations of the investors. To calculate the value of the firm, the FCFF is discounted by the weighted average cost of capital (WACC) that considers both debt and equity. To calculate the value of equity, FCFE is discounted using the cost of equity.

In most of the valuation exercises, cost of debt is taken as the prevailing interest rates in the economy for borrowers with comparable credit quality. And, cost of equity is the rate of return on investment that is required by the company's common shareholders. Capital Asset Pricing Model - CAPM, which establishes the relationship between risk and expected return forms the basis for cost of equity. It has three components: the risk free rate of return (Rf); a return that reflects the return expected on a stock market portfolio (Rm); and a return that compensates for the business and financial risks specific to the stock of the company itself, known as the company's beta. Beta of a stock measures change in the stock prices vis a vis change in the benchmark index/stock market.

Given the above understanding, cost of equity is generally computed with help of Capital Asset Pricing Model (CAPM), which defines cost of Equity as follows:

$Ke = Rf + \beta * (Rm – Rf)$

Where:

Rf = Risk Free Rate,

(Rm – Rf) = Market risk premium (MRP), and

β = Beta

The Weighted Average Cost of Capital of the firm (WACC) is then calculated as under:

WACC = [Ke * Equity / (Equity+ Debt)] + [Kd * (1-Tax)* Debt / (Equity+ Debt)]

= [Ke * We] + [Kd * (1-Tx)*Wd]

Where Kd = Cost of Debt, Wd = Weight of Debt, Ke = Cost of Equity, We = Weight of Equity

The free cash flows are then discounted at the appropriate discount rate to arrive at the **Enterprise Value (EV)** of the firm or the value of equity, as the case may be.

DCF valuations may result in erroneous output if sufficient rigor does not go into estimating the cash flows and discount rate.

10.5 Absolute Valuations vs. Price-Value Sense

As seen above, DCF method throws up a number on valuation based on stream of cash flows, their expected timings and a discount rate. It is a complicated method, given the assumptions which go into estimation of future cash flows.

Valuation exercise is undertaken to compare the price with value to arrive at whether a business is overpriced, under-priced or fairly priced by the market. This helps analysts make their recommendation – buy, sell or hold.

Instead of finding absolute valuation of business, we may like to compare 'what we get' with 'what we pay' to arrive at sense of valuation. What we pay is the price and what we get is the earnings and assets of the business. Therefore, if we can compare price with earnings and assets, we can get a sense of valuation – not the absolute valuation but whether something is cheap or expensive.

10.6 Earnings Based Valuation Matrices

10.6.1 Dividend Yield – Price to Dividend Ratio:

Dividends are the profits that the company pays out to its equity holders. Well managed companies maintain a stable dividend payout to its investors even while ensuring that the growth prospects of the company are adequately funded, by ploughing back a portion of the profits. Dividends can be compared with the share price for a sense on cheapness or expensiveness of equities. Popularly known term on this subject is dividend yield, which is defined as:

Dividend Yield = Dividend per share (DPS)/Current price of stock

Consider a company with history of paying dividend of Rs. 5 or more over last 5 years including the last dividend. At different price points the dividend received translates into the following multiples: The We may look at this business at different price points ranging from Rs. 50 to Rs. 200. When we compare what we get against what we pay at different price points, results are as follows:

Price	Divided	Div. Yield	Price/Div.
50	5	10.00%	10
100	5	5.00%	20
150	5	3.33%	30
200	5	2.50%	40

It is quite apparent from the above table that at Rs. 50, the business is available at 10% dividend yield and a price to dividend ratio of 10 times. The price to dividend ratio is a measure of what the market is willing to pay for a rupee of dividend. If the dividend yield is compared with the corresponding bond yield, it looks pretty interesting on post tax return on investment basis. If bonds are offering 10% coupon, on post tax basis with 30% tax rate, post-tax return on bonds would be say 7%. Here, equity is offering 10% post-tax return (dividends being tax free in the hands of investors). Also, there is a potential for upside in equity if earnings go up. This upside may not be available in debt as debt papers would generally get redeemed at their redemption value.

At a market price of Rs. 200, the dividend yield is 2.5%. Clearly it is inferior to the bond yield. Also, the price to dividend ratio for Rs. 200 is quite high at 40 times.

If equity yields are in general higher than bond yields, clearly equity is available cheap. This is typically true when markets are down. On the other hand, during bull markets, equity yields are quite lower than the bond yields. A stock available at dividend yields higher than those of comparative stocks and the market dividend yield may be seen as a value pick. It may not necessarily be so. A high dividend payout may indicate limited avenues for expansion and investment, which in turn may limit capital appreciation.

10.6.2 Earning Yield - Price to Earnings Ratio:

When dividend yields are quite low, market analysts move to earning yields, a step higher to consider the investment potential in a stock. Earning yield may be defined as:

Earning Yield = Earnings Per Share (EPS)/Current price of stock

The reverse of Earning Yield is the popularly known Price to Earnings Ratio which can be defined as:

Price to Earnings Ratio = Current price of stock/ Earnings Per Share (EPS)

The Earnings Per Share (EPS) is the true earning for an equity holder. Generally, only a part of the EPS is distributed as dividend and part is retained by the company for future expansion.

The PE ratio represents the value placed by the market on each rupee of earnings of the company. It is calculated using the current market price and the historical EPS, or forward PE by using the forecasted EPS. Investors may be willing to pay a higher price for the earnings if they expect above average growth in the future, or the company is expected to make a turnaround in its performance.

A high PE stock relative to the peer group numbers and the market PE, is seen as an expensive stock. A stock that seems expensive on the basis of PE multiple calculated on the basis of historic earnings may seem less so on the basis of forward earnings. Forward PE must be used with caution since a wrong estimation of the earnings may result in a faulty conclusion on the value of the stock. A stock with a relatively low PE multiple may be seen as an undervalued stock. However, it is important to analyze if the market has priced the stock lower due to poor quality of earnings. PE ratios of all stocks tend to be high in a bull market and tend to be low in a bear market.

The previous example can be extended to move to EPS from DPS. Assume, the EPS for the business was Rs. 10 as per the last financials. The multiples at different price points ranging from Rs. 50 to Rs. 200 are as follows:

Price	EPS	Earning Yield	Price/Earning
50	10	20.00%	5
100	10	10.00%	10
150	10	6.67%	15
200	10	5.00%	20

It is quite apparent from the above table that at Rs. 50, the business is available at 20% earning yield and Price to Earnings ratio of 5 times. If this is compared with the corresponding bond yield or bond's Price to Earnings ratio (reverse of bond yield), it looks pretty interesting on post

tax return on investment basis. If bonds are offering 10% yield or are trading at 10 times on Price to Earnings ratio, equity at 5 times price to Earnings ratio is clearly an attractive proposition. Also, never forget the potential upside which may further exist in equity if earnings go up. This upside may not be available in debt as debt papers would generally get redeemed at their redemption value (this may not be true if interest rates move southward and bonds generate capital gain for the investors).

Same business at Rs. 200, means, 5% earning yield and 20 times price to earnings ratio. Clearly, it is inferior to the bond yield and bond's price to earnings ratio.

It can also be stated that when we compare earning yields with the bond yields, if equity yields are in general higher than bond yields, clearly equity is available cheap. This is typically true when markets are down. At that time, newspapers would be filled with stock recommendations based on earning yields. On the other hand, during bull markets, equity yields are quite lower than the bond yields. Alternative way to state would be that during bull markets Price to Earnings ratios of equity would be quite high.

One question that may be asked here is which earnings to use to compute the ratio – historical, trailing (rolling 12 months) or forward. It is believed that trailing earnings are the most sensible piece to use here. In practice, when markets are in bull phase and are continuously going up, P/E ratios on historical or trailing earnings basis may give sense of businesses being expensive and market participants start justifying the cheapness of valuations based on forward earnings sometimes 2 or 3 years forward earning, which could be quite speculative.

10.6.3 Growth Adjusted Price to Earnings Ratio (PEG Ratio)

When earning yields are quite low or price to earnings ratios are quite high, analysts move to growth adjusted earning yields or growth adjusted price to earnings ratio as a step higher to make investment potential look good.

The PE ratio has limitations in identifying an overvalued stock from a company in a high growth phase and an undervalued stock from a fundamentally poor stock. Another valuation ratio, the growth adjusted price to earnings ratio (also called PEG Ratio) is useful in identifying if a stock is fairly valued.

The PEG ratio is defined as:

Growth adjusted Price to Earnings Ratio = [Current price of stock/ Earnings Per Share]/Growth rate

PEG Ratio was the term coined by Peter Lynch, a savvy investor and fund manager. He believed that sometimes a high price to earnings ratios could be justified on the foundation of high growth potential in the business. However, he also warned that high growth regime may not continue for very long time and investors should be cautious of this fact. He stated that as long as PEG ratio is less than 1, business may be treated as undervalued. A stock with a PE ratio is seen as overvalued.

For example: If there are two businesses with P/E ratios 10 and 25 but with different growth potentials of 7% and 30% for next few years, on the PEG ratio basis, second business at P/E of 25 and PEG of less than 1 (25/30) is cheaper than the first business with P/E of 10.

10.6.4 Enterprise Value to EBDITA Ratio

All of the above measures - dividend yield, earnings yield, P/E ratio and PEG ratio. The focus has been on the valuations relevant to equity holders. Only equity is taken into consideration vis a vis return on that. However, businesses have two sources of capital – Equity and Debt. Sometimes, businesses could be very heavily leveraged and in those cases, their PE or PEG ratios could be absolutely distorted as a measure of cheapness.

Let's think on the subject. If an investor buy all the equity in a business, he would have to implicitly assume the liability of the business. Therefore, for a buyer of the entire business, what matters is the value of the entire firm or what he would have to pay to take over the entire business including value of equity and value of debt. This is called Enterprise Value (EV) and it considers the value of the equity and the debt as debt becomes the liability of the acquirer on acquisition of 100% equity. It is calculated as:

Enterprise value = Market value of equity (Market capitalization) + Market value of debt – cash and cash equivalents

Market Capitalization is simply arrived at by multiplying the market price with the number of outstanding equity shares. Market value of debt is generally taken as outstanding debt on the balance sheet of the company. This cost is reduced by any cash or cash equivalents on the balance sheet as we can use that amount to pay out debts of business. This is the price of the entire firm to a buyer.

The EV can be compared with Earnings available to the entire capital (equity and debt holders) - Earnings before Interest and taxes called EBIT. Lower the EV to EBIT ratio, better it is for the acquirer. It is useful to compare firms that have different capital structures, since the earnings are taken before the interest payout.

Consider an example. If market capitalization of a company is Rs. 100,000, debt on balance sheet is Rs. 50,000 and cash and cash equivalents are Rs. 10,000. EV of the firm is Rs. 140,000. If its EBIT is Rs. 10,000, EV to EBIT ratio would be 14 (140,000/10,000). If its EBIT is 40,000, EV to EBIT ratio would be 3.5 (140,000/40,000). Clearly, ratio of 14 looks like an expensive price to pay and 3.5 looks like value for money.

Sometimes market participants use EBDITA instead of EBIT as a measure of return on applied capital given that Depreciation/Amortization is a non-cash expense. In that case, they talk about EV as EBIDTA multiple as a measure of cheapness or expensiveness of businesses. Higher this ratio, more expensive the business. And, lower this ratio, cheaper the business.

10.6.5 Enterprise Value (EV) to Sales Ratio

When EV to EBIT or EV to EBDITA ratios start showing signs of expensiveness, then market participants, to justify cheapness of businesses, move to measures such as EV to Sales Ratio. It is used as a comparative metric when the firm makes no operating profits. If a business is making sales but losing money continuously even at the operating level, it may be a candidate for restructuring.

10.7 Assets based Valuation Matrices

The previous section looked at the comparison between what is paid and what is received in terms of earnings. In this section, assets will replace earnings and focus on the balance sheet variables to identify value in the business.

Return on Equity (ROE) and Return on Capital Employed (ROCE), as defined in previous chapters, are two important ratios in investment which are computed as follows:

ROE – Net Profits / Equity capital or Net-worth

ROCE – EBIT/ Total Capital Employed (Debt + Net-worth)

ROE and ROCE indicate how well a business allocates its capital and what are the returns on the book values of equity and equity along with debt respectively. However, you and me as investors are looking at return on our invested capital today and not essentially return on book values (business is not available at book value today). Therefore, our concern is Return on our Invested Capital, which is defined as:

Return on Invested Capital – Earnings / Invested Capital

Let us address this point of return on our capital here.

10.7.1 Return on Equity (ROE) Based Valuation – Price to Book Value Ratio

On left hand side of a balance sheet, there are primarily two things – Equity and Debt. If we buy entire equity of a business, we assume the responsibility of the debt and simultaneously own the assets. In practice, it is next to impossible to know the market value of the assets in the Balance Sheet. In absence of this information, if we assume that each asset on the Balance Sheet may be converted into cash at its book value, we would be able to honour business liability fully and be left with cash equivalent to net-worth (Equity plus reserves). It is mentioned here that, in reality during liquidations, this does not happen and assets are rarely able to cover the liability forget any payout to the equity owners.

Now, if we were to buy entire equity, we would pay market capitalization of the company. Against that we would get book value of the company. Price to book value ratio looks at the price as a multiple of the book value of the assets. The book value is the accounting value of the assets and not the realizable value. It is calculated as

Price to book value ratio = Market price per share/ Book value per share

Or

Price to book value ratio = Market capitalization/ Book value of equity or net-worth

This ratio indicates, how much we are paying to buy each Rs. of book value of equity. It is clear that lower this number, assets are available cheap and higher this number, assets are expensive. Interestingly, we can combine this price to book value ratio with RoE ratio to assess the adequacy of the return on invested capital to facilitate investment decision making.

Consider a business with a net-worth of Rs. 100,000 and Market capitalization is Rs. 500,000 and RoE of 45%. Given these numbers, the PBV ratio is 5. If the RoE is 45% and the investor is paying 5 times of the book (Price to Book Value is 5) to buy equity, the money would generate only one fifth of this ROE i.e. 9%. This number has to be at least equal to the targeted return on capital required by the investor to make the investment worthwhile. For example, if the investor wants 15% minimum return on capital invested, the investor would not be willing to pay more than 3 times viz Rs. 300,000 to buy equity because 45% on Rs. 100,000 would translate to 15% on Rs. 300,000.

10.7.2 Return on Capital Employed (ROCE) based valuation – Enterprise Value (EV) to Capital Employed Ratio

Enterprise value includes the value of equity and debt of a firm and is defined as:

EV = Value of Equity + Value of Debt – cash and cash equivalents

EV to Capital Employed ratio is defined as:

EV to Capital Employed ratio = Enterprise Value / Capital Employed (Total Equity + Total Debt)

EV to Capital Employed ratio along with Return on Capital Employed ratio can be used in combination to have a sense on return on our invested capital to facilitate investment decision making.

Consider a business with net-worth is Rs. 100,000, debt on the Balance Sheet is Rs. 100,000, Market capitalization is Rs. 500,000, cash and cash equivalents on the balance sheet are nil and ROCE (EBIT/Capital Employed) is 45% per annum.

Capital Employed = 100,000 + 100,000 = 200,000

EV = 500,000 + 100,000 = 600,000

EV to Capital Employed Ratio = 600,000/200,000 = 3

If ROCE is 45% and the investor is paying EV which is 3 times of capital employed, the money would generate only one third of this ROCE i.e. 15% (45% on 200,000 would amount to 15% on 600,000). The investment decision will depend upon whether this is an adequate return on capital invested. For example, if the investor wants a 20% minimum return on capital, in this example, the investor would not be willing to pay EV of more than 2.25 times (45/20) of employed capital in the business viz. Rs. 450,000.

10.7.3 Net Asset Value Approach

Net asset value (NAV) of equity is the market value of an entity's assets minus the value of its liabilities. This is different from the book value or net-worth of equity as one is using the market value of asset (not book value of assets) to arrive at the NAV. Net asset value may represent the current value of the total equity, or it may be divided by the number of outstanding shares to compute net asset value per share. This valuation methodology is used in some businesses which are extremely assets oriented such as Real Estate, Shipping, Aviation etc.

10.8 Relative Valuations - Trading and Transaction Multiples

Relative valuation is basically intuitive. We do this all the time in our personal lives. Here, we try to value an asset looking at how the market prices similar/comparable assets. Best example of this is pricing real estate. If you are looking to buy an apartment, you always find the price of comparative apartments in that locality which kind of becomes your indicative value for negotiation purpose. This is highly useful and quick estimate of value with limited computations and assumptions. However, it reflects current market mood, which may be quite optimistic or pessimistic. Therefore, it is always good to use parameters like maximum, minimum, average etc. while using relative valuations.

Practically, all the earnings and assets based valuation parameters defined above can be looked at for each business historically for several years. One can also look at these parameters as comparison across the peers and/or industry ratios to build a sense whether something looks cheap or expensive. These comparables may be coming from the Stock market (called Trading Multiples) or from the other similar transactions (called Transaction Multiples).

10.9 Sum-Of-The-Parts (SOTP) Valuation

Several businesses operate as a cluster/bundle of businesses rather than one business. For example, ITC, L&T and other corporations have different business under one umbrella. Best way to value these businesses is to value each business separately and then do the sum of those valuations. This method of valuing a company by parts and then adding them up is known as Sum-Of- Parts (SOP) valuation.

Please note for all practical purposes each of the business verticals for these conglomerates would be treated as an independent business and valued as described above in this unit based on earnings and assets. And, then simple summation can be used to arrive at the value of the total business.

10.10 Other Valuation Parameters in New Age Economy and Businesses

Sometimes, people wonder on valuations of the new age businesses such as Ecommerce companies or tech companies such as Whatsapp, Zomato, Linkedin, Facebook etc. Honestly speaking, it is difficult to put the numbers together to arrive at the valuations at which these transactions are happening. We may call it our own limitation to understand the value proposition. Without attempting to do this impossible task, let us state that in new age economy, people use absolutely new parameters/language such as eyeballs, page reviews,

footfall, ARPU, no. of users etc. to justify exorbitant valuations. Honestly speaking, as Buffett would state, all of these should ultimately translate into profits for owners at some point in time. If there is no visibility of that happening, most of these valuations would sustain till there is a story line, people believe in those stories and next buyer is available for the same. And, would fall like a pack of cards in absence of those. We have seen that during the .com boom in 2000 – 2001.

10.11 Capital Asset Pricing Model

Capital Asset Pricing Model has been captured in this chapter earlier. Please refer to section 10.4.

10.12 Objectivity of Valuations

So many computations for valuation result in to a question "Is Valuation objective?" This may appear so but it is a very subjective exercise as inputs required in various methods, as defined above, are quite subjective without any generally accepted standards. Further, Valuation is not timeless and it can change dramatically if circumstances of business change. To conclude, there is no precise estimate of value and complicated quantitative models need not mean the valuation is precise; it only means a false impression of preciseness.

10.13 Some Important Considerations in the Context of Business Valuation

- If earning power of a business is high, book value (BV) of shares could be less important. But, if earning power of business is low, BV becomes very important.
- As equity/share reflects part ownership in a business, to value share, we need to value entire business.
- EV and not the market capitalization is the true value of the firm for private owner.
- PE for a leveraged firm may be deceptive – look at debt levels in the business.
- Look at the consolidate numbers and not just the standalone numbers.
- Focus on ROE and not EPS – EPS does not account for retained earnings.
- Leverage improves ROE but excessive leverage is risky.
- Differentiate between ROCE and ROE – ROCE reflects the true return on capital. ROE could be manipulated by high leverage.
- ROCE and ROE should be closely knit. Any wide variation should trigger investigations.

Sample Questions

1. **If interest rates in the economy rise, price of the bond would _____.**
   - **a. Fall**
   - b. Rise

2. **Which of the following is a non-cash charge?**
   - a. Amortization of capital expenses
   - b. Depreciation
   - c. Interest on Foreign Exchange Borrowing
   - **d. Both (a) and (b)**

3. **What is the earnings yield, if the price of a stock is Rs. 195 and EPS is Rs. 13?**
   - a. 15 percent
   - **b. 6.67 percent**
   - c. 0.067 percent
   - d. 0.15 percent

4. **How is price to earnings ratio calculated?**
   - a. Earnings Per Share (EPS)/Current price of stock
   - b. Current price of stock* Earnings Per Share (EPS)
   - **c. Current price of stock/ Earnings Per Share (EPS)**
   - d. Earnings Per Share (EPS)*Current price of stock

CHAPTER 11: FUNDAMENTALS OF RISK AND RETURN

LEARNING OBJECTIVES:

After studying this chapter, you should know about:

- Concepts of Return on Investment
- Calculating returns - simple, annualized and compounded
- Risks in Investment and measuring market risk
- Sensitivity analysis and Concept of Margin of Safety
- Comparative analysis of equity and bond returns
- Behavioral biases influencing investment

11.1 Concept of Return of Investment and Return on Investment

Investment means putting up capital in an identified investment product to earn returns from it. The investor expects two things from the investment: to earn a return and, more importantly to get back the capital invested. The preservation or safety of the capital invested is as important a parameter in evaluating an investment as is the return that it is expected to provide. The return from an investment needs to be evaluated in terms of the level of the return, the volatility in the return and the nature of return: periodic or capital appreciation.

The return that an investment generates in money terms is not a correct representation of its level of return. The return has to be seen in conjunction with the capital invested to earn it.

Return on Capital/investment (ROI) is the comparison of returns with the investment and can be defined for single period as:

Return on investment (%) = (Net profit / Investment) × 100

Higher the potential ROI, better for the investors. As a decision tool, it is simple to understand. However, one has to be careful while using the ROI numbers for those investments, where the returns are not known in advance, such as equity and mutual funds. In all such investments, estimates are based on past returns and assumptions are made for future returns.

11.2 Calculation of Simple, Annualized and Compounded Returns

The return on an investment can be calculated in different ways. The returns calculated must enable the following:

- Help the investors decide if the return is adequate to meet their goals and to compensate for the risk in the investment
- Help the investors compare different investments on the basis of returns
- Help the investors evaluate the performance of an investment relative to benchmark

The returns from an investment can be in the form of periodic payouts such as interest, dividends and rent, or in the form of appreciation in the value of the investments. An increase in the price of the investment forms part of the returns to the investor and used in the calculation of the RoI, whether it is realized or not. Together, they form the total returns from the investment.

Periodic income may be known in advance, such as interest on fixed income investments, or it may change from one period to the next, as in equity dividends. In some investments, such as gold and other commodities, there is no periodic return at all. Either way, high or low, this is a positive cash flow for the investor. The other component of the return in some investments, the gain in value, can be positive or negative. That is, the investment may make a gain or loss. If it is a gain, then it adds to the returns. If it is a loss, then it eats into the periodic income, if any, that the investment has earned and the total income comes down.

The RoI calculated as (Total Returns/Total Cost) x 100, is the return earned over a particular period.

For example: an investor purchased 150 shares of company ABC. Each share costs Rs. 25. The investor paid Rs. 20 commission to the broker. The shares were sold at Rs. 30 per share. The investor also paid Rs. 20 commission fee to the broker for the transaction. The investor received dividends that amounted to Rs. 1 per share during the holding period. So, the total cost incurred be:

Total Cost = shares x price per share + commission fee

Total Cost = 150 x Rs. 25 + Rs. 20 = Rs. 3, 770

Total Returns = Dividends + Sales Proceeds

Dividends = 150 x Re. 1 = Rs. 150

Sales Proceeds = Number of shares x Price per share - Commission fee

Sales Proceeds = 150 x Rs. 30 - Rs. 20 = Rs. 4, 480

The simple return would be:

Simple Return = (Rs. 4, 480 + Rs. 150) / Rs. 3, 770 - 1 = 1.23 - 1 = 0.23

The simple return on the investments is 23%. This is called single period return or absolute return. However, this computation does not take the period over which the return was earned into consideration.

A 23% return earned over a one year is not the same as a 23% return earned over a longer or shorter investment period. Return that does not take the investment horizon into consideration makes it difficult to compare between investments that have been held for different periods. This is facilitated by converting the return to a uniform period, i.e. one year. This is called Annualized Return.

The absolute return is converted into annualized return by dividing it by the number of months/days that the investment was held and multiplying it by 12 months/365 days.

In the earlier example, if the investor had held the investment for 15 months over which the 23% was earned, then the simple annualized return for the investment would be:

(23%/15) x 12 = 18.4%

The annualized return calculation does not take the time value of money into consideration. Time value of money is the concept that money has the ability to be invested to earn more money. Therefore, money received earlier is worth more than money received later. The Compounded Annual Growth Rate (CAGR) method of calculating returns takes this into consideration. CAGR calculations assume that the periodic returns received from an investment can be re-invested to earn returns and this forms part of the total returns of the investment. It is calculated as the rate of return at which the original investment grows to the final investment value. CAGR is computed as:

{(End Value/Beginning Value)^(1/n)}-1, where n is the holding period in years.

In the earlier example, if this investment was held for 5 years, the CAGR is calculated as:

3770 x (1+r)^5 = 4630

(1+r)^5 = 4630/3770 = 1.23

And, r = 1.23 ^ (0.2) - 1 = 0.04227

Therefore, the compound annual growth rate on the investment comes to 4.2%.

Please note that we have ignored the time factor in case of dividend. If we knew with precision when we received this dividend, we could calculate the future value of dividend at the time of liquidation of shares i.e. at the end of 5 years (Dividend + interest over the period). Consideration of this interest income would have increased our CAGR by some basis points.

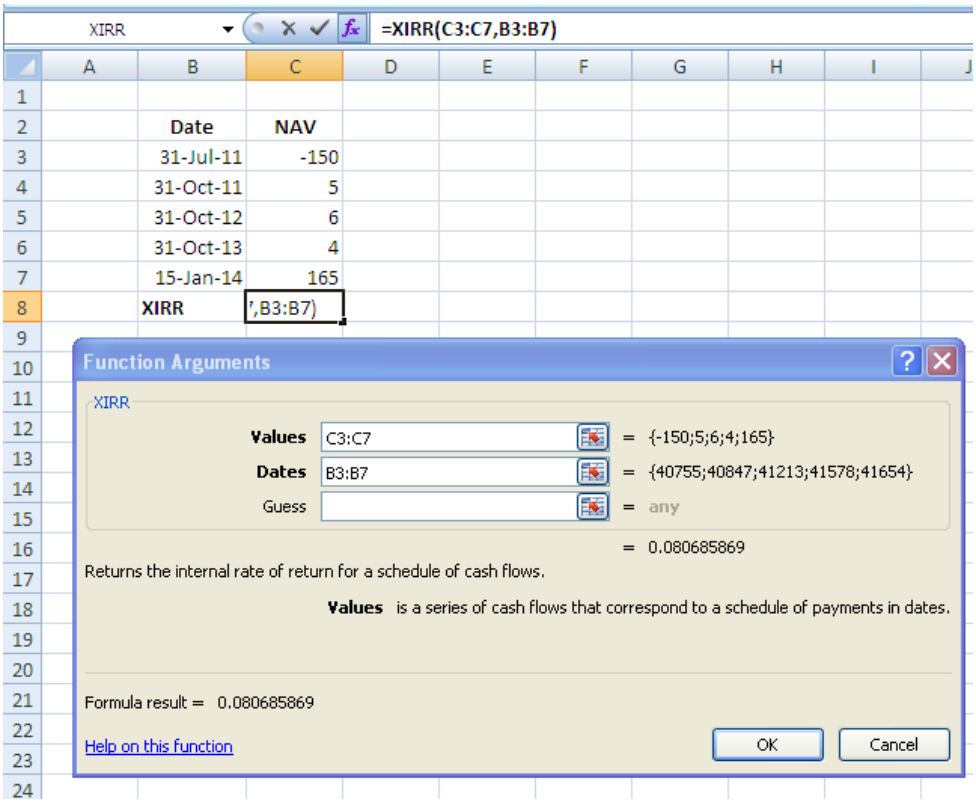
Compound annual growth rate allows for making a clearer evaluation of the performance of the stock as it takes both holding period of investment and time value of money in to consideration. CAGR is the smoothened rate of return at which the return grew to the final value over the investment period. The actual return in each year of the holding period may be different from the CAGR. CAGR is the accepted standard measure of return on investment in financial markets, except in case of returns that involve periods of less than one year.

CAGR for multiple cash flows

Consider the following problem in which an investor receives intermediate cash inflows as well as final proceeds from the sale of his equity share.

An investor buys an equity share on 31 Jul 2011 for Rs.150. He receives a dividend of Rs.5 on 31 Oct 2011; Rs.6 on 31 Oct 2012; Rs.4 on 31 Oct 2013. He sells the share on 15 Jan 2014 for Rs.165. What is the CAGR of his investment?

This problem cannot be solved using the direct CAGR formula. The underlying CAGR for these multiple flows has to be calculated by using XIRR function in Excel. The procedure stated in the previous example can be followed here as well: separate columns should be created for inputting dates and corresponding matching cash flows. A screen shot of the solution looks like this:



As the box shows, the CAGR is 8.06%.

The CAGR of an investment does not represent the actual rate at which the investment grew each year of the investment period. It is a smoothened average annual rate, calculated based on the inflows and outflows from the investment. The actual underlying annual return may be volatile and this reflects the risk in the investment.

11.3 Risks in Investments

Risk and return are an integral part of investing. The return that an investment generates cannot be seen in isolation from the risk that has to be assumed to earn it. A high return can be earned only if the investor is willing to take higher risk. Risk in an investment is the volatility and uncertainty in the returns and in the extreme case, the loss of capital invested. An investment is also deemed to be risky if the actual returns earned are different from the expected returns. For example, a fixed deposit with a bank is seen as a lower risk product because the bank is unlikely to default on the interest payment or the return of the capital invested. On the other, investment in an equity product is seen as risky because the dividend is uncertain as to its level and when it will be received and the value of the invested amount sees high fluctuations.

All investments are subject to risks. The nature and extent of the risk may differ. It is important for an investor to be able to identify the type of risk in an investment to be able to decide whether it is suitable to their situation. For example, a retired investor may be willing to put up with the risk of insufficiency of returns earned to meet expenses, but may be unwilling to take the risk of loss of capital in equity investments, even if the returns are higher. Some of the common risks that are seen in investments are captured here:

Inflation Risk: Inflation risk represents the risk that the money received on an investment may be worth less when adjusted for inflation. Inflation risk is also known as purchasing power risk. It is a risk that arises from the decline in value of security's cash flows due to the falling purchasing power of money.

For example, Asha has invested a lump sum in bank fixed deposits that yield her about Rs. 5000 per month. This is adequate to cover the cost of her household provisions. Suppose that inflation rises by 10%, meaning that there is a general rise in prices of goods by about 10%. Then, Rs. 5000 will no longer be enough to cover Asha's monthly provisions costs, she would need 10% more, or Rs. 5500. The purchasing power of her cash flows has declined. Asha would have to manage her budget at a lower level, or reallocate her investments to earn higher cash flows. Her investment, though in a safe bank deposit, has been exposed to inflation risk.

Inflation risk is highest in fixed return instruments, such as bonds, fixed deposits and debentures, where investors are paid a fixed periodic interest and returned the principal amount at maturity. Both interest payments and principal repayments are amounts fixed in absolute terms. Suppose a bond pays a coupon of 8% while the inflation rate is 7%, then the real rate of return is just 1%. If inflation goes up to 9%, the bond may return a negative real rate of return. Thus, even if there is no risk of default on payment of interest or return of principal, the real value of the investment has been eroded because of inflation.

***Interest Rate Risk*:** Interest rate risk refers to the risk that bond prices will fall in response to rising interest rates, and rise in response to declining interest rates. Bond prices and interest rates have an inverse relationship.

For example, an investor invests in a 5-year bond that is issued at Rs. 100 face value, and pays an annual interest rate of 8%. Suppose that after one year, the Reserve Bank of India cuts policy interest rates. As a result, all rates in the markets start declining. New 5-year bonds are issued by companies with a similar credit rating at a lower rate of 7.5%. Investors in the old bonds have an advantage over investors in the new bonds, since they are getting an additional 0.5% interest rate. Since investors want to earn the maximum return for a given level of risk, there will be a rush of investors trying to buy up the old bonds. As a result, the market price of the old

bond will go up. The price will rise upto a level at which the IRR of the cash flows from the old bond is about 7.5%. This will take place for all bonds until their yields are aligned with the prevailing market rate.

Suppose, instead, that policy rates are increased. New issuers of 5-year debt will be forced to offer higher interest rates of, say, 9%. Now, investors in the new bonds will earn more than investors in the old bonds. As a result, holders of the old bonds (which pay only 8% interest) will try to sell off their holdings and try to buy the new bonds. This market reaction will push down the prices of the old bonds upto the level at which the IRR of its cash flows exactly matches the market rate.

The relationship between rates and bond prices can be summed up as:

- If interest rates fall, or are expected to fall, bond prices go up.
- If interest rates rise, or are expected to rise, bond prices decline.

Bond investments are subject to volatility due to interest rate fluctuations. This risk also extends to debt funds, which primarily hold debt assets.

Business Risk: Business risk is the risk inherent in the operations of a company. It is also known as operating risk, because this risk is caused by factors that affect the operations of the company. Common sources of business risk include cost of raw materials, employee costs, introduction and position of competing products, marketing and distribution costs. Not all businesses are affected by the same risks. Holding a diversified portfolio is an efficient way to diversify this risk.

Market Risk: Market risk refers to the risk of the loss of value in an investment because of adverse price movements in an asset in the market. The price of an asset responds to information that impacts its intrinsic value. For example, an increase in interest rates reduces the value of the cash flows from existing bonds and therefore leads to a fall in the price of bonds (interest rate risk), an appreciation in the currency reduces the earning expectations of export-oriented companies and leads to a fall in price (currency risk). Market risk affects those investments where transactions happen at current applicable prices, such as equity, bonds, gold, real estate, among others. Investments such as deposits or small savings schemes are not marketable securities and the investor gets a pre-defined amount on maturity. They have no market risk; but they also do not gain in value.

Credit Risk: Credit Risk or default risk is refers to the possibility that a particular bond issuer will not be able to make expected interest rate payments and/or principal repayment. Debt instruments are subject to default risk as they have pre-committed pay outs. The ability of the

issuer of the debt instrument to service the debt may change over time and this creates default risk for the investors.

The sovereign government and institutions associated with the government do not have a default risk associated with their borrowings because the government has the ability to raise the funds to pay its domestic currency debt through taxation and in the worst case by printing currency. All other borrowers have credit risk. Market participants measure the credit risk in an instrument based on the credit rating provided by the credit rating agencies. Credit rating is an alpha-numeric symbol that expresses the credit rating agencies assessment of the ability and intention of the borrower to meet the obligations arising from the debt. SEBI has standardized the symbols used by credit rating agencies. Symbols such as AAA, A1 indicate the highest degree of credit worthiness while D represents default status. The credit rating is not a static parameter and is liable to change every time there is a change in the fundamentals of the company that will affect its ability to meet its obligations. Typically, lower credit rating represents higher credit risk to reflect a greater perceived default risk, which results in higher interest rate expectations by the investors (higher cost of borrowing for the borrowers).

Holding a diversified portfolio of bonds is the best way to protect the investments from the default by one issuer.

Liquidity Risk: Liquidity risk refers to an absence of liquidity in an investment. Thus, liquidity risk implies that the investor may not be able to sell his investment when desired, or it has to be sold below its intrinsic value, or there are high costs to carrying out transactions. All of this affects the realisable value of the investment.

The market for corporate bonds in India is not liquid, especially for retail investors. 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. Investments in property and art are also subject to liquidity risk, since identifying a buyer and determining the price is a lengthy process in the absence of frequent transactions. Some investments come with a lock-in period during which investors cannot exit the investment.

Call Risk: Call risk is specific to bond issues and refers to the possibility that a debt security will be called prior to its maturity. Call risk usually goes hand in hand with reinvestment risk, discussed below. Call risk is most prevalent when interest rates are falling, as companies trying to save money will usually redeem bond issues with higher coupons and replace them with issues with lower interest rates.

Reinvestment Risk: Re-investment risk arises from the probability that income flows received from an investment may not be able to earn the same interest as the original interest rate. The risk is that intermediate cash flows may be reinvested at a lower return as compared to the original investment. The rate at which the re-investment of these periodic cash flows is made will affect the total returns from the investment. The reinvestment rates can be high or low, depending on the levels of interest rate at the time when the coupon income is received. This is the reinvestment risk.

- If Interest rate rises , reinvestment risk reduces or is eliminated
- If Interest rate falls, reinvestment risk increases

Choosing the cumulative option available in most debt investments is a way for investors to protect the investment from re-investment risk. In a marketable security, such as a bond, this may expose the bond to higher price volatility.

Political Risk: Risk associated with unfavourable government actions - possibility of nationalization, change in tax structures, licensing etc. is called political risk. Because the Government has the power to change laws affecting businesses/securities, almost all businesses are exposed to the political risk.

Country Risk: Country risk refers to the risk related to a country as a whole. There is a possibility that it will not be able to honour its financial commitments. When a country defaults on its obligations, this can affect the performance of all other securities in that country as well as other countries it has relations with. Country risk applies to all types of securities issued in that country.

The risks in an investment can be categorized as systematic and unsystematic risks. Systematic risk refers to those risks whose impact is felt across investment categories. These risks are also known as undiversifiable risks, because they cannot be eliminated through diversification. Systematic risk is caused due to factors that may affect the economy/markets as a whole, such as changes in government policy, external factors, wars or natural calamities. Inflation risk, exchange rate risk, interest rate risk and reinvestment risk are systematic risks.

Unsystematic risk is the risk specific to individual securities or a small class of investments. Hence it can be diversified away by including other assets in the portfolio. Unsystematic risk is also known as diversifiable risk. Credit risk, business risk, and liquidity risks are unsystematic risks.

Investments will have a component of systematic and unsystematic risk. The following examples illustrate how an investment can be subject to both systematic and unsystematic risk.

- Ajay invests in equity shares of an infrastructure company. He believes that the company will do well because of the growing demand for infrastructure, and the company's strong technical and managerial capabilities. Ajay's investment is subject to two main risks- business risk and market risk. Ajay can reduce his business risk by investing in other companies operating in different sectors. But an economic slowdown would reduce the profitability of all companies. This is the market risk in equity investment that cannot be diversified.
- Ashima is keen to invest in bonds issues. Her investment is subject to credit risk and interest rate risk. She can reduce credit risk by increasing the proportion of highly-rated bonds in her portfolio. However, if interest rates rise, then prices of all the bonds held by her will decline. This is the interest rate risk which is common to all debt investments

11.4 Concepts of Market Risk (Beta)

Beta is a measure of the systematic risk of a security or a by comparing the volatility in the investment relative to the market, as represented by a market index. It measures the risk of an investment that cannot be diversified away.

Beta of 1 indicates that the security's price will move with the market. Beta of less than 1 means that the security will be less volatile than the market. And, beta of greater than 1 indicates that the security's price will be more volatile than the market. For example, if a stock's beta is 1.2, it's theoretically 20% more volatile than the market both on up and down moves.

Beta is used in the capital asset pricing model (CAPM), a model that calculates the expected return of an asset based on its beta and expected market returns. Model assumes that the beta is the only reason why an investor should expect a return higher than market/index return.

However, many value investors don't pay any attention to Beta. For instance, Seth Klarman of the Baupost group, a value investor wrote: *"I find it preposterous that a single number reflecting past price fluctuations could be thought to completely describe the risk in a security. Beta views risk solely from the perspective of market prices, failing to take into consideration specific business fundamentals or economic developments. The price level is also ignored, as if IBM selling at 50 dollars per share would not be a lower-risk investment than the same IBM at 100 dollars per share. Beta fails to allow for the influence that investors themselves can exert on the riskiness of their holdings through such efforts as proxy contests, shareholder resolutions, communications with management, or the ultimate purchase of sufficient stock to gain corporate control and with it direct access to underlying value. Beta also assumes that the upside potential and downside risk of any investment are essentially equal, being simply a*

function of that investment's volatility compared with that of the market as a whole. This too is inconsistent with the world as we know it. The reality is that past security price volatility does not reliably predict future investment performance (or even future volatility) and therefore is a poor measure of risk."

11.5 Sensitivity Analysis to Assumptions

Securities analysts use financial models to value securities of different kinds. These valuations are based on several inputs/assumptions about future aspects of the business and some of these assumptions may be critical ones. The output from the model is only as good or reliable as the quality of the variables that have been plugged in to it. Many of the inputs may be assumptions or based on calculations after considering a number of factors. If sufficient rigor does not go into researching, collecting and evaluating information, the accuracy of the inputs into the model may be poor, and thereby the output may not be reliable too. It is important to identity the critical variables in a valuation model and do an analysis of how the output will vary under different scenarios for the primary or critical variables. This is known as sensitivity analysis. For example, in a DCF valuation model, the discounting rate is a primary input to arrive at the value of the security. The discounting rate must reflect the risks inherent in the business. The assessment of the risks will impact the rate used in the model. Sensitivity analysis will look at multiple scenarios for the discounting rate and the impact on the final value. Typically, a best case and worst case scenario is considered, along with the most likely scenario.

11.6 Concept of Margin of Safety

Margin of Safety is the term popularized by Mr. Benjamin Graham (known as "the father of value investing") and his followers, most notably Mr. Warren Buffett. In simple words, margin of safety refers to the difference between value and prices, when securities are bought at a price significantly below their intrinsic value. Higher the difference between value and price (value higher than price), higher the margin of safety.

While Margin of safety allows an investment to be made with minimal downside risk, it doesn't guarantee a successful investment. However, it does provide room for error/cushion against an analyst's judgment on valuation of securities. Determining a company's "true" worth (its intrinsic value) is anyway highly subjective.

There is no universal standard to determine how wide the "margin" in margin of safety should be. Each investor must come up with his or her own number.

11.7 Comparison of Equity Returns with Bond Returns

Bond and equity returns vary as to the nature of return, the level of returns and the composition of the returns. Bond returns are primarily from coupon income, with some contribution from gains in value as a result of decrease in interest rates. Bonds are seen as lower risk investments relative to equity because there is a pre-defined return from coupon and there may be a security created in favour of the bond holders. The returns bond investments earn is therefore lower. The primary risk in bond investment is the default risk. Higher the credit risk, greater is the interest that the borrower has to pay and the investor will receive.

Equity returns are primarily from the appreciation in the value of the investment. The dividend is a small component of the total returns from the equity. There is no assurance on either the dividend or the appreciation, which makes equity investments risky. Returns that these investments have the potential to generate are also higher to compensate for the risk. Well run companies try to pay regular and stable dividends to its investors. The value of the share in the market is influenced by the performance of the company as well as external economic factors that impact the company.

Warren Buffet stated that investors should always compare the returns on bonds and stocks at the time of deploying their capital. If the Rate of Return on stocks is greater than the Rate of Return on bonds, one should buy stocks. And, if Rate of Return on bonds is greater than the Rate of Return on stocks, one should deploy capital in bonds. Generally, at the time of distress in economies, interest rates go significantly down to give push to the economies and at that time equities may be available at dirt cheap valuations even on the basis of dividend yield.

11.8 Basic Behavioral Biases Influencing Investments

According to conventional financial theory, the world and its participants are rational human being and strive to maximize their wealth prudently. However, there are many instances where emotion and psychology influence our decisions, causing us to behave in unpredictable or irrational ways. Dean of Wall Street, Mr. Benjamin Graham stated in his popular book "*The Intelligent Investor*" that markets are more psychological and less logical. Behavioural finance, a relatively new field of finance, attempts to combine behavioural and psychological theory with conventional economics and finance to provide explanations for why people make irrational financial decisions.

Simon Savage, co-head of European and global long/short strategies at GLG Partners, a hedge fund manager owned by Man Group, said: "*We were all born to be bad fund managers because of inbuilt behavioural biases, which are present in everyone to various degrees. It's through an*

awareness of them that as a fund manager you can begin to build a defence mechanism to avoid these vulnerabilities. Ignore them at your peril."

Here are some of the main behavioural biases that investors need to look out for:

Loss-aversion bias: Loss aversion refers to investor's tendency to strongly prefer avoiding losses to acquiring gains. The fear of loss leads to inaction. Studies show that the pain of loss is twice as strong as the pleasure of 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 their preferred strategy.

Confirmation bias: Confirmation bias, also called my side bias, is the tendency to search for, interpret, or prioritize information in a way that confirms one's beliefs or hypotheses. It is a type of cognitive bias and a systematic error of inductive reasoning. For example, when a trader buys a stock for a reason and that reason doesn't work out so the trader makes up another one for owning the position. Similarly, first we make decision in mind and then find for the information to justify that intuitive decision.

Ownership bias: Things owned by us appear most valuable to us. Sometimes known as the endowment effect, it reflects the tendency to place a higher value on a position than others would. It can cause investors to hold positions they would themselves not buy at the current level.

Gambler's fallacy: Predicting absolutely random events on the basis of what happened in the past or making trends when there exists none. It is the mistaken belief that if something happens more frequently than normal during some period, then it will happen less frequently in the future, or that if something happens less frequently than normal during some period, then it will happen more frequently in the future (presumably as a means of balancing nature).

Winner's curse: Tendency to make sure that a competitive bid is won even after overpaying for the asset. While behaviourally it is a win, financially, it may be a loss.

Herd mentality: This is a common behaviour disorder in investing community. 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. Most of the individuals don't go against the crowd as economist John Maynard Keynes said: "It is better for reputations to fail conventionally than to succeed unconventionally."

Anchoring: Anchoring is a cognitive bias that describes the common human tendency to rely too heavily on the first piece of information offered when making decisions. 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. Actually, the decision should be made purely on the basis of what price and value difference exist today in light of available information rather than based on what the prices were in the past.

Projection bias: We project recent past to the distance future completely ignoring the distant past.

11.9 Some Pearls of Wisdom from Investment Gurus across the World

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. Or, this could just be a change in perception or excessive liquidity in the system. The returns to equity investors go up as stock prices appreciate to reflect this optimism/liquidity or perception change. But a bull market can overdo its exuberance. As buyers pay a higher and higher prices for stocks, prices move beyond what can be justified by the underlying intrinsic values. Also businesses tend to overarch themselves, borrowing to fund expansion based on optimistic forecasts. Input costs for raw materials and labour and interest costs for capital increase as the bull market reaches its peak. Unrealistic expansion in prices tends 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. Central bankers reduce the interest rates to give push to consumption and investments and slowly the bear cycle gives way to the next bull cycle.

While Booms and busts are the way of market, maintaining sanctity and discipline is what great investors in the world teach us. Here are some pearls of wisdom from some of these great masters:

Charlie Munger:
"Understanding how to be a good investor makes you a better business manager and vice versa."

Walter Schloss:
"If you can't find good value investing positions, park your money in cash."

David Dreman:
"Psychology is probably the most important factor in the market – and one that is least understood."

John Tempelton:
"Invest at the point of maximum pessimism."

Peter Lynch:
"Go for a business that any idiot can run – because sooner or later, any idiot is probably going to run it."

Benjamin Graham:
"To achieve satisfactory investment results is easier than most people realize; to achieve superior results is harder than it looks."

Warren Buffett:
"Rule No.1 is never lose money. Rule No.2 is never forget rule number one."

One may refer to several books on investments or just do google on each of these investors to be able to access hundreds of pearls of wisdom on investing and general life shared by these great investors and many more similar to them.

Sample Questions

1. **Calling feature in bonds _____.**
   a. **Is most prevalent when interest rates are expected to fall**
   b. Favours investors
   c. Is against the interest of issuers
   d. Is most prevalent when interest rates are expected to rise

2. **_____ bias can prevent investors from benefiting from market corrections.**
   a. Projection
   b. Herd Mentality
   c. Anchoring
   d. Confirmation

3. **Business risk is also known as operating risk, because this risk is caused by factors that affect the operations of the company. State whether True or False.**
   a. True
   b. False

4. **Dividend is a small component of the total returns from the equity. State whether True or False.**
   a. True
   b. False

CHAPTER 12: QUALITIES OF A GOOD RESEARCH REPORT

LEARNING OBJECTIVES:

After studying this chapter, you should know about:

- Essentials of a Good Research Report
- Checklist based approach to writing research reports

12.1 Qualities of a Good Research Report

Research reports is a multipurpose document and does the following:

Presents an investment idea - Provides market perspective - Detailed company analysis.

All the research analysts have access to, more or less, the same information i.e. annual reports, quarterly reports etc., In-fact, all good analysts and experts of a sector have similar things to say. So how does one stand out and be the best?

Research analysts, make a difference by the way in which they present their views, conclusions and recommendations. The communication aspect of an analyst's job is as important as analysis, of which writing research report is one.

Writing research reports, to an extent, is a creative process. Creativity in the sense of how one structures the report and communicates the message. What an analyst does is to take in is a lot of financial information and give out is an understandable version of what that financial information mean. The process of converting numbers to views does demand for the certain qualities. As with many other creative processes, there is no single answer to this question but there are certain ground rules which one can follow to make a good report.

- Clarity of Idea
- Simplicity of delivery
- Presenting the argument clearly
- Narrative structure
- Create customized reports according to the reader type

Writing a good research report - Planning, Drafting and Editing:

Like any other writing projects, compiling research reports also have three important steps - Planning, Drafting and Editing. The major sections of a research report include:

Company business, peer group analysis, shareholding pattern, key strengths, key concerns, industry overview, company fundamentals, key financial indicators and financials.

The writing process has to be planned as to how each section will be approached and assign a deadline to each. As there are many reports to be written and the work load shall be high near quarterly results season, it is important to maintain high levels of discipline otherwise the delay can have a cascading effect on the work.

Once done with the planning, work should begin on each section. Generally, each organization has a template of its own and therefore working on a pre-defined structure makes the work a little bit easier. Almost all the sections of a research report are fact based and therefore filling them is more of a copy-paste function but certain important sections requires understanding of the business and thorough communication with management.

Fact-based sections in research report:

Peer group analysis, shareholding pattern, company fundamentals, key financial indicators and financials.

Source of information: Annual reports, quarterly reports, calculations.

View-based section in research report:

Company Business, Key Strengths, Key concerns, Industry Overview.

Source of information: Communication with management, Personal Understanding of the business and industry.

It is also suggested to make use of data visualization software's and prepare visual charts to present the data. Visual data is easier to understand than written numbers.

Once a draft is ready it should be rechecked for financial figures, spell-checks and grammatical errors and edited accordingly.

Things to watch-out:

There are thousands of reports prepared after every results season and only a few of them get the attention. What makes the other reports fail? After observation of many years, the following are a few reasons that are listed out for failure of a research report:

- Unnecessary details

- Long sentences
- No proper structure
- Inconsistent views
- Complex language

12.1.1: Rating Conventions

In financial markets, while rating stocks, various conventions are used by the research analysts. The prevalent recommendations include: **"buy", "overweight", "hold", "underweight" and "sell"**. These recommendations are typically made to reflect the analyst's view on the total returns that the security will make over a specified time horizon, or the returns of the security relative to the returns of the market or to the peer group. Different research agencies may have different definitions for each term. The interpretation of the recommendation is also typically mentioned in the research report for the immediate reference of the user. For example, a 'buy' may indicate an expectation that the stock will deliver more than 10% returns over the next 12 month period, 'hold' may indicate that the stock's return is expected to range between -10% and 10% over the next 12 month period and a 'sell' recommendation may indicate an expected return of less than -10% over the period. Analysts also use recommendations such as 'accumulate' and 'reduce' to reflect a view that triggers for the stock's performance is expected in the defined time frame, which will result in the returns materialising. 'Outperformer', 'performer or neutral' and 'underperformer' indicate the expectation of the stock's returns relative to the sector or market. The analyst may even indicate the expected level of out/underperformance. 'Overweight', 'equal weight' and 'underweight' are ratings used to describe a stock or sectors performance relative to the market. An 'overweight' rating indicates the expectation that the stock or sector will perform better than the market, while 'underweight' indicates a relatively poor performance and 'equal weight' indicates performance in line with the market. It is important to be clear about what the analyst is saying through the recommendation before taking action in line with it.

12.2 Checklist Based Approach to the Research Reports

In the era of information overload, it is easy to drown in the ocean of information around. Also, sometimes, information available at different places is contradictory. To ensure consistency in the decision making process, it becomes imperative to note down important decision drivers in a disciplined and committed manner. Please remember that market rewards disciplined investing and often punishes emotional, distracted and disorganized approaches.

Accordingly, checklists could be a great way for analysts to stay disciplined and methodical when it comes to researching new ideas, maintaining an existing portfolio and exiting positions.

Just as airline and military pilots have used checklists for decades to eliminate avoidable accidents and produce better results, so too can investors use checklists to develop better and more consistent investment behaviours.

Obvious advantages of checklist approach are:

- Checklist helps avoid lazy mistakes or short-cuts.
- Checklist ensures than an analyst always does what he or she intends to do in a disciplined manner.
- Checklists help in objective and facts based decisions.
- Checklists leave a decision-making trail that can be modified and corrected with time.

In a popular book "*The Checklist Manifesto*", author, Dr. Atul Gawande makes a distinction between errors of ignorance (mistakes made out of ignorance), and errors of ineptitude (mistakes made because of incorrect use of knowledge). He argues that errors of second type can be avoided to a large extent by following a checklist approach to literally everything in life.

12.3 A Sample Checklist for Investment Research Reports

Here is a sample checklist for investment research. We must state that the questions given in the checklist are only indicative in nature and readers may add/delete/edit the questions to the checklist as per their requirements. Financials parameters taken in the quantitative section are also indicative only for reference purpose.

Qualitative Parameters
Do I understand the business
Details of technology collaboration, if any
What is the revenue model – how does business make money. What is segment wise revenue contribution and how it is supposed to change going forward.
Output is a necessity or a choice
Can other industry/business challenge this industry/business (is there a product substitute). If yes, which and to what extent
What are distribution channels (marketing infrastructure)
Is the business replicable/scalable/good franchise business

What is Demand – Supply gap in the industry and sustainability of its gap
How does business look like a decade down the line? Would it be existing and be more valuable
What is the moat/competitive advantage/niche/differentiation of company and sustainability of these characteristics
What is downside /Risks in the business/company/industry
Does the company has output pricing freedom/ability and sustainability of this pricing power
Are inputs available without interruption? Pricing power of company on inputs and sustainability of this pricing power
What is the level of competition in business (major competitors and company's position vis a vis competitors). Are entry barriers in business significantly strong?
What is the quality of management – able, honest and with good integrity
What is promoter's stake? What are insiders doing (buying/selling by promoters and top mgmt.). Any pledge of shares by promoters. *Any buy back by the company in last three years.*
Any major observation from corporate governance report
Present shareholding pattern. Changes in SH pattern over last 5 yrs. List of top 10 shareholders (with % shareholding).
Is there a catalyst in business
Can a fool/idiot run this business (Business is simple, output is a necessity and competition is not tough)
Strengths of company
Weaknesses of company and how company is handling them
Opportunities to company and how company is tapping them
Threats to company and how company is handling them
Quantitative Parameters
Equity History and important points
Has the revenues been growing consistently. Do we have visibility of revenues going forward

Whether business has stable and growing profitability (NPM > 10% and growth in EPS continuously over last 5 years)
Whether business has low leverage (D/E<1 continuously and interest coverage > 3 continuously over last 5 years)
Whether company has stable and growing return track record (ROE> 15% and ROCE > 15% continuously over last 5 years)
Whether company has stable and growing min. 5 years dividend track record
Whether company has good cash flows (positive operating cash flows and positive free cash flows continuously over last 5 years).
Any important/notable auditors' qualification
Any important observation from notes to accounts (intangibles, MTMs on outstanding derivatives and guarantees etc.). Any change in the accounting policy with impact on P/L and B/S.
What are company's capex plans in near future and how does co. propose to finance that. Incremental capital – equity and/or debt planned?
Is the company financially disciplined? Am I buying this business for quality of assets, earnings and cash flows?
Valuation Parameters
What is Valuation/intrinsic value of the business? How confident I am on valuation
Is business cheap relative to itself, peers and market on various valuation parameters (Price, P/E, P/BV, Price/Sales etc.) over a period of time (Last 5 years)
What justifies Margin of Safety (MOS). Business is available at what discount to its intrinsic value
Reasons of market mispricing and likelihood of correction.
Final Decision Parameters

Sample Research Report:

- http://www.bseindia.com/download/Research_Report/Report/536492/2013-14/Ace%20Tours%20Worldwide_%20Ltd.pdf
- http://www.nseindia.com/corporate/eq_3IINFOTECH_upd12_10Dec2013.pdf

Sample Questions

1. **For analysts, which is the authentic source to check facts on a Company?**
   - **a. Annual Reports**
   - b. Research reports and opinions of Research Analysts
   - c. Media reports
   - d. Business Portals

2. **Leverage ratio is a part of _____ parameter of business analysis.**
   - a. Qualitative
   - **b. Quantitative**

3. **Which of the following is not a valuation parameter for business analysis?**
   - a. Intrinsic Value
   - b. P/BV Ratio
   - c. P/E Ratio
   - **d. Demand & Supply of Securities in the market**

4. **If a stock has exceeded its Target Price, an analyst may recommend _____.**
   - a. Buy
   - **b. Sell**
   - c. Hold

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CHAPTER 13: LEGAL AND REGULATORY ENVIRONMENT

LEARNING OBJECTIVES:

After studying this chapter, you should know about:

- Regulatory Framework of Indian Financial markets
- Significant regulations in the Indian securities market
- Code of Conduct/Ethics for research analysts
- Disclosure requirement for research analysts

13.1 Regulatory infrastructure in Financial Markets

The regulators in the Indian Financial Market ensure that the market participants behave in a responsible manner so that securities market continues to be a major source of finance for corporate and government and the interest of investors is protected. Objective of all regulators is to create a fair and competitive market place with intermediaries ensuring high standard of services to the market participants. Briefs about various regulators who regulate and contribute towards development of the Financial Market are as given below:

13.1.1 Ministry of Finance

The Ministry of Finance is an important ministry within the Government of India. It handles issues related to taxation, financial legislation, financial institutions, capital markets, state finances and the Union Budget. It comprises of five departments:

Department of Economic Affairs is the nodal agency of the Central Government to formulate and monitor India's macroeconomic policies, covering monetary and fiscal policy as well as the functioning of the Capital Market including stock exchanges. Other responsibilities include the mobilization of external resources and issuance of bank notes and coins. A principal responsibility of this Department is preparation of the Union Budget annually.

Department of Expenditure oversees the expenditure management of Government of India. It is concerned with, among other things, the administration of various financial rules and regulations including service conditions of all Central Government employees. The department is also involved with matters such as financial assistance to states and borrowings by states.

Department of Revenue: This department handles the matters relating to all the Direct and Indirect Taxes through two statutory Boards namely, the Central Board of Direct Taxes (CBDT) and the Central Board of Excise and Customs (CBEC).

Department of Financial Services: This department covers Banks, Insurance, Financial Services provided by various government agencies and private corporations, pension reforms and Industrial Finance and Micro, Small and Medium Enterprise. It started the Pradhan Mantri Jan Dhan Yojana in 2014.

Department of Disinvestments*:* This department is responsible for systematic policy approach to disinvestment and privatization of Public Sector undertakings. The department is also concerned with the financial policy relating to the utilization of proceeds of disinvestment.

13.1.2 Ministry of Corporate Affairs

The Ministry of Corporate Affairs is primarily concerned with administration of the Companies Act, 1956, 2013 other allied Acts, rules and regulations framed there-under mainly for regulating the functioning of the corporate sector in accordance with law. The issuance of securities by companies is also subject to provisions of the Companies Act. The Registrar of Companies (ROC) is the authority appointed under the Companies Act to register companies and to ensure that they comply with the provisions of the law.

The Ministry is also responsible for administering the Competition Act 2002 which has replaced the Monopolies and Restrictive Trade Practices Act, 1969 (MRTP). The Ministry also supervises three professional bodies, viz., the Institute of Chartered Accountants of India (ICAI), the Institute of Company Secretaries of India (ICSI) and the Institute of Cost and Works Accountants of India (ICWAI).The Ministry of Corporate Affairs is also vested with the responsibility of administering the Partnership Act, 1932, the Companies (Donations to National Funds) Act, 1951 and Societies Registration Act, 1980.

13.1.3 Reserve Bank of India

Reserve Bank of India (RBI) is the central bank of the country which has the responsibility of administering the monetary policy. Its key concern is to ensure the adequate growth of money supply in the economy so that economic growth and financial transactions are facilitated, but not so rapidly which may precipitate inflationary trends. This is borne out in its Preamble, in which the basic functions of the Bank are thus defined:

"…to regulate the issue of Bank Notes and keeping of reserves with a view to securing monetary stability in India and generally to operate the currency and credit system of the country to its advantage".

In addition to the primary responsibility of administering India's monetary policy, RBI has other important responsibilities, such as financial supervision. The main functions of RBI are listed as below:

1. **As the monetary authority*:*** to formulate, implement and monitor the monetary policy in a manner as to maintain price stability while ensuring an adequate flow of credit to productive sectors of the economy.

2. **As the regulator and supervisor of the financial system*:*** To prescribe broad parameters of banking operations within which Indian banking and financial system functions. The objective here is to maintain public confidence in the system, protect the interest of the people who have deposited money with the banking system and facilitate cost-effective banking services to the public.

3. **As the manager of Foreign Exchange*:*** To administer the Foreign Exchange Management Act 1999, in a manner as to facilitate external trade and payment and promote orderly development and maintenance of the foreign exchange market in India.

4. **As the issuer of currency*:*** To issue currency and coins and to exchange or destroy the same when not fit for circulation. The objective that guides RBI here is to ensure the circulation of an adequate quantity of currency notes and coins.

5. **Developmental role*:*** To perform a wide range of promotional functions to support national objectives.

6. **Banking functions*:*** RBI acts as a banker to the Government and manages issuances of Central and State Government Securities. It also acts as banker to the banks by maintaining the banking accounts of all scheduled banks.

13.1.4 Securities and Exchange Board of India

Securities and Exchange Board of India (SEBI) is the regulatory authority for the securities market in India. SEBI was established under Section 3 of SEBI Act, 1992 under an act of Parliament. The Preamble of the SEBI Act describes the basic functions of SEBI thus:

"…..to protect the interests of investors in securities and to promote the development of, and to regulate the securities market and for matters connected therewith or incidental thereto"

Thus, SEBI's primary role is to protect the interest of the investors in securities and to promote the development of and to regulate the securities market, by measures it thinks fit. SEBI's regulatory jurisdiction extends over corporates in the issuance of capital and transfer of securities, in addition to all intermediaries and persons associated with the securities market. It can conduct enquiries, audits and inspection of all concerned and adjudicate offences under the Act. It has powers to register and regulate all market intermediaries and also to penalize them in case of violations of the provisions of the Act, Rules and Regulations made there under. SEBI has full autonomy and authority to regulate and develop an orderly securities market. The main functions of SEBI are listed as below:

- Protecting the interests of investors in securities.
- Promoting the development of the securities market.
- Regulating the business in stock exchanges and any other securities markets.
- Registering and regulating the working of stock brokers, sub–brokers etc.
- Promoting and regulating self-regulatory organizations in securities market
- Promote investors' education and training of intermediaries in the securities market.
- Prohibit insider trading in securities
- Prohibiting fraudulent and unfair trade practices
- Regulate substantial acquisition of shares and takeover of companies
- Calling for information from, undertaking inspection, conducting inquiries and audits of the stock exchanges, intermediaries, self–regulatory organizations, mutual funds and other persons associated with the securities market.

SEBI merged with the Forward Markets Commission on September 28, 2015 and now regulates the commodities markets in India. It is the regulatory body that oversees regulating and promoting forward and futures trading in commodities. The regulator's role includes monitoring the trading conditions in the forward markets, including demand and supply and prices, and take necessary action to streamline the functioning of the market. It advises the government on granting and withdrawing recognition to associations and undertakes inspection of the associations.

It prescribes regulatory measures for limits on open positions of clients and members, circuit filters to control price volatility, managing risk through margins and specifying regulations for physical delivery of contracts and penalty for defaults.

13.1.5 Insurance Regulatory and Development Authority of India (IRDAI)

IRDAI regulates the insurance sector in India in accordance with the terms of the IRDA Act, 1999. IRDAI is the licensing authority for insurance companies and defines the capital and net-

worth requirements for insurance companies. IRDAI's mission is to regulate, promote and ensure orderly growth of the insurance sector, including the re-insurance business, while ensuring protection of the interest of insurance policyholders. It ensure the adherence of insurance products to the rules laid down and defines the rules for the terms and conditions of insurance contracts such as sum assured, surrender value, settlement of claims, nomination and assignment, insurable interest and others. It regulates the distribution of insurance products by laying down the qualification and training requirements of intermediaries and the payment of commission to distributors. IRDAI supervises the functioning of the Tariff Advisory Committee that determines the rates for general insurance products. It also lays down the modalities for investment of funds by insurance companies.

13.1.6 Pension Fund Regulatory and Development Authority (PFRDA)

The PFRDA is the authority entrusted to act as a regulator of the pension sector in India under the PFRDA Act, 2013. It was constituted in October 2003 with the following responsibilities: (a) To promote old age income security by establishing, developing and regulating pension funds, (b) To protect the interests of subscribers to schemes of pension funds and related matters. The PFRDA has been assigned the responsibility of designing the structure of funds and constituents in the National Pension System (NPS). It is responsible for registering the various constituents such as the fund managers, custodians, Central record keeping agency and trustee banks and to define the parameters of their roles and responsibilities. The PFRDA shall:

a) Deal with all matters relating to the promotion and orderly growth of the pension market
b) Propose appropriate legislation for the purpose indicated above
c) Carry out such other functions as may be delegated to the authority

13.2 Important regulations in Indian Securities Market

The Indian Securities market are governed by several Acts, Regulations and Bye-laws. Some of the relevant ones are described below:

13.2.1 Securities Contracts (Regulation) Act, 1956

The Securities Contracts (Regulation) Act, 1956 (SC(R)A), provides for direct and indirect control of virtually all aspects of securities market to SEBI – instruments, intermediaries, issuers and investors. It prevents undesirable transactions in securities by regulating the business of securities dealing and trading. The act covers a variety of issues, of which some are listed below:

1. Granting recognition to stock exchanges
2. Corporatization and demutualization of stock exchanges
3. The power of the Central Government to call for periodical returns from stock exchanges
4. The power of SEBI to make or amend bye-laws of recognized stock exchanges
5. The power of the Central Government (exercisable by SEBI also) to supersede the governing body of a recognized stock exchange
6. The power to suspend business of recognized stock exchanges
7. The power to prohibit undesirable speculation

13.2.2 Securities and Exchange Board of India Act, 1992

The SEBI Act of 1992 was enacted "to provide for the establishment of a Board to protect the interests of investors in securities and to promote the development of, and to regulate, the securities market and for matters connected therewith or incidental thereto".

The SEBI in the broader sense performs the functions as stated in the above para, however, without any prejudice to the generality, the act also provides for the following measures:

Section 11(1) of the SEBI Act, 1992, lays down that subject to the provisions of the SEBI Act, 1992, it shall be the duty of the Board to protect the interests of investors in securities and to promote the development of and to regulate the securities market, by such measures as it thinks fit. Further, section 11(2) lays down that the measures that SEBI could adopt that may include the following:

a) To regulate the business in stock exchanges and any other securities markets.
b) To register and regulate the working of stockbrokers, sub-brokers, share transfer agents, bankers to an issue, trustees of trust deeds, registrars to an issue, merchant bankers, underwriters, portfolio managers, investment advisers and others associated with the securities market. SEBI's powers also extend to registering and regulating the working of depositories and depository participants, custodians of securities, foreign institutional investors, credit rating agencies, and others as may be specified by SEBI.
c) To register and regulate the working of venture capital funds and collective investment schemes including mutual funds
d) To promote and regulate SROs
e) To prohibit fraudulent and unfair trade practices relating to the securities market.
f) To promote investors' education and training of intermediaries in the securities market.
g) To prohibit insider trading in securities
h) To regulate substantial acquisition of shares and takeover of companies

i) To require disclosure of information, to undertake inspection, to conduct inquiries and audits of stock exchanges, mutual funds, other persons associated with the securities market, intermediaries and SROs in the securities market. The requirement of disclosure of information can apply to any bank or any other authority or board or corporation
j) To perform such functions and to exercise such powers under the Securities Contracts (Regulation) Act, 1956 as may be delegated to it by the Central Government
k) To levy fees or other charges pursuant to implementation of this section
l) To conduct research for the above purposes

Further, SEBI is also empowered to enforce disclosure of information or to furnish information to agencies as may be deemed necessary. SEBI Act, 1992, empowers SEBI to impose penalties and initiate adjudication proceedings against intermediaries and market participants on various grounds.

13.2.3 Securities and Exchange Board of India (Prohibition of Insider Trading) Regulations, 2015

The regulations prohibiting insider trading have been made pursuant to section 30 of the SEBI Act, 1992.

The regulations define “insider” as any person who is a connected person or one in possession of or having access to unpublished price sensitive information.

A connected person is defined by the act as anyone who has been associated with the company in the six months prior to the connected act and include any person who has been in frequent communication with the officers of the company in pursuit of contractual, fiduciary or employment relationship or as an officer, employee or director of the company or holds any position that provides access to such unpublished price sensitive information.. Further, an explanation is provided of the expression, “person is deemed to be a connected person” in detail. Such persons are deemed to be connected persons until the contrary is established. Examples of such a person are:

a) An immediate relative of a connected person including spouse, parent, sibling and child and other dependent persons
b) A holding company, subsidiary or associate company under the same management or group
c) An intermediary as specified in section 12 of the SEBI Act, 1992, Investment Company, Trustee Company, Asset Management Company or an employee or director thereof or an official of a stock exchange or of clearing house or corporation
d) A merchant banker, share transfer agent, registrar to an issue, debenture trustee, broker, portfolio manager and others, as specified

e) A member of the Board of Directors or an employee of a public financial institution as defined in section 4A of the Companies Act, 1956
f) A relative of any of the aforementioned persons
g) A banker of the company

The regulations define unpublished price sensitive information (UPSI) that affect the company or its securities as those that is not generally available and which can materially affect the price of the securities. Such information include the following:

1. Periodical financial results of the company
2. Intended declaration of dividends, both interim and final
3. Issue of securities, or buyback of securities and other change in capital structure
4. Mergers, acquisition, demergers, delisting, disposal of business
5. Any change in key personnel
6. Material events as defined under the listing agreement

Regulation 3 of the SEBI (Prohibition of Insider Trading) Regulations 2015, prohibits an insider from communicating, allowing and/or providing access to unpublished price sensitive information to any person including other insiders except in the course of the execution of their responsibilities and legal obligations. Similarly, no person shall procure such information except for the performance of their duties or execution of legal obligations.

Regulation 4 prohibits the trading in listed securities or those proposed to be listed by any insider in possession of UPSI. Exception to this rule include off-market transactions between insiders who all have the same information. If the trades were done by non-individuals, then the persons taking decisions on the trade were not in possession of the UPSI. Insiders can trade in the securities if the trades were in accordance to a trading plan that has been approved by the compliance officer. The trades shall not be done within a period of 6 months from the public disclosure of the plan or within the period defined by the regulations of the announcement of the financial results of the company.

Connected persons have to establish that any trades done by them were not in violations of the regulations.

Trading by insiders have to be disclosed in the prescribed form. Disclosures include those by the relatives of the insider as well as of those for whom the insider makes trading decisions. Initial disclosure of holding by promoters, directors and key personnel have to be made within 30 days of the regulations coming into force or 7 days of such appointment. Continuous disclosures have to be made every calendar quarter where the trading value exceeds Rs. Ten

lakhs. The company has to inform the stock exchange of the disclosures within two days of it being received. The company may require any connected persons to make required disclosures as and when deemed fit.

As per the SEBI's Regulations, an organization needs to appoint a compliance officer who is responsible for setting forth policies and procedures and monitoring adherence to the code of fair disclosure and code of conduct aimed at preservation of "Price Sensitive Information". The principles of fair disclosure include ensuring prompt, uniform and universal dissemination of UPSI to avoid selective disclosure, ensuring information provided to analysts and consultants is not UPSI and developing best practices to record the proceedings in meetings with analysts and investor relation conferences to ensure official confirmation of the information provided. Designated persons who have access to information as part of their functions cannot trade in the securities during the period in which they are expected to hold UPSI. The compliance officer will decide when trading can commence based on factors such as when the UPSI will become generally available information. Designated persons include analysts, law firms, auditors and consultants, among others. Trading by the designated persons is subject to pre-clearance by the compliance officer if the value exceeds the limits set by the board of directors. Entities handling UPSI, such as auditors, analysts, consultants and others, are also required to formulate a code of conduct to monitor the trading in the securities by their employees.

Chinese Wall

To prevent the misuse of confidential information the organisation / firm shall adopt a "Chinese Wall" policy which separates those areas of the organisation/firm which routinely have access to confidential information, considered "insider areas" from those areas which deal with sale/ marketing/investment advice or other departments providing support services considered public areas and processes which would permit any designated persons to cross the wall".

The employees in the insider area shall not communicate any Price Sensitive Information to anyone in the public area. The employees in the inside area may also be physically segregated from the employees in the public area. The demarcation of the various departments as inside area may be implemented by the organisation / firm. However, in exceptional situations, employees from the public areas may be brought "cross the wall" and given confidential information on the basis of "need to know" criteria. Such cases should necessarily be intimated to the Compliance Officer.

These regulations also state that "Analysts, if any, employed with the organization /firm while preparing research reports of client company(s) shall disclose their shareholdings/interest in such company(s) to the Compliance Officer and the Analysts who prepare research report of

listed company shall not trade in securities of that company for thirty days from preparation of such report."

13.2.4 SEBI (Prohibition of Fraudulent and Unfair Trade Practices relating to Securities Markets) Regulation, 2003

The SEBI (Prohibition of Fraudulent and Unfair Trade Practices relating to Securities Market) Regulations, 2003 prohibit fraudulent, unfair and manipulative trade practices in securities. These regulations have been made in exercise of the powers conferred by section 30 of the SEBI Act, 1992.

Regulation 2(1) (c) defines fraud as inclusive of any act, expression, omission or concealment committed to induce another person or his agent to deal in securities. There may or may not be wrongful gain or avoidance of any loss. However, that is inconsequential in determining if fraud has been committed. Some of the instances cited are as follows:

a) A wilful misrepresentation of the truth or concealment of material fact in order that another person may act, to his detriment
b) A suggestion as to a fact which is not true, by one who does not believe it to be true
c) An active concealment of a fact by a person having knowledge or belief of the fact
d) A promise made without any intention of performing it
e) A representation, whether true or false, made in a reckless and careless manner

Prohibition of Certain Dealing in Securities

Chapter II of the regulations prohibits certain dealings in securities covering buying, selling or issuance of securities. Further it specifies instances of fraud which includes the following:

a) Indulging in an act which creates a false or misleading appearance of trading in the securities market
b) Dealing in a security which is not intended to effect a transfer of beneficial ownership but to serve only as a device to inflate or depress or cause fluctuations in the price of such security for wrongful gain or avoidance of loss
c) Advancing or committing to advance any money to any person thus inducing the other to buy any security in any issue only with the intention of securing the minimum subscription to such issue
d) Paying, offering or agreeing to do either, directly or indirectly to any person any money or money's worth for inducing such person for dealing in any security with the motive of inflating, depressing, maintaining or causing fluctuation in the price of such security
e) Any act or omission which is tantamount to a manipulation of the price of a security

f) A person dealing in securities, publishing, or causing to publish or reporting or causing to report any untrue information or information which he does not believe to be true, prior to, or in the course of dealing in securities

Prohibition of Manipulative, Fraudulent and Unfair Trade Practices

Dealing in securities shall be deemed to be a fraudulent or an unfair trade practice if it involves fraud and may include all or any of the following:

a) indulging in an act which creates false or misleading appearance of trading in the securities market;
b) dealing in a security not intended to effect transfer of beneficial ownership but intended to operate only as a device to inflate, depress or cause fluctuations in the price of such security for wrongful gain or avoidance of loss;
c) advancing or agreeing to advance any money to any person thereby inducing any other person to offer to buy any security in any issue only with the intention of securing the minimum subscription to such issue;
d) paying, offering or agreeing to pay or offer, directly or indirectly, to any person any money or money's worth for inducing such person for dealing in any security with the object of inflating, depressing, maintaining or causing fluctuation in the price of such security;
e) any act or omission amounting to manipulation of the price of a security;
f) publishing or causing to publish or reporting or causing to report by a person dealing in securities any information which is not true or which he does not believe to be true prior to or in the course of dealing in securities;
g) entering into a transaction in securities without intention of performing it or without intention of change of ownership of such security;
h) selling, dealing or pledging of stolen or counterfeit security whether in physical or dematerialized form;
i) an intermediary promising a certain price in respect of buying or selling of a security to a client and waiting till a discrepancy arises in the price of such security and retaining the difference in prices as profit for himself;
j) an intermediary providing his clients with such information relating to a security as cannot be verified by the clients before their dealing in such security;
k) an advertisement that is misleading or that contains information in a distorted manner and which may influence the decision of the investors;
l) an intermediary reporting trading transactions to his clients entered into on their behalf in an inflated manner in order to increase his commission and brokerage;
m) an intermediary not disclosing to his client transactions entered into on his behalf including taking an option position;

n) circular transactions in respect of a security entered into between intermediaries in order to increase commission to provide a false appearance of trading in such security or to inflate, depress or cause fluctuations in the price of such security;
o) encouraging the clients by an intermediary to deal in securities solely with the object of enhancing his brokerage or commission;
p) an intermediary predating or otherwise falsifying records such as contract notes;
q) an intermediary buying or selling securities in advance of a substantial client order or whereby a futures or option position is taken about an impending transaction in the same or related futures or options contract;
r) planting false or misleading news which may induce sale or purchase of securities.
s) mis-selling of units of a mutual fund scheme. Mis-selling means sale of units of a mutual fund scheme by any person, directly or indirectly by making false or misleading statement or concealing or omitting material facts of a scheme or concealing the associated risk factors of the scheme or not taking reasonable care to ensure suitability of the scheme to the buyer.
t) illegal mobilization of funds by sponsoring or causing to be sponsored or carrying on or causing to be carried on any collective investment scheme by any person.

Investigation

Chapter III of the SEBI (Unfair Trade Practices) Regulations, 2003 relates to investigation of transactions of the nature described above. In particular, under regulation 8(1), it shall be the duty of every person who is under investigation:

a) To produce books, accounts and documents that may be required by the Investigating Authority and also to furnish statements and information that is sought.
b) To appear before the Investigating Authority personally when required to do so and to answer questions posed by the authority.

SEBI may without prejudice to the provisions contained in sub-sections (1), (2), (2A) and (3) of section 11 and section 11B of the SEBI Act, by an order in the interests of the investors and the securities market issue or take any of the following actions or directions either pending investigation or enquiry or on completion of the investigation or enquiry namely:

a) Restrain persons from accessing the securities market,
b) Impound and retain the proceeds or securities in respect of any transaction which is in violation or prima facie in violation of these regulations,
c) Direct an intermediary or any person associated with the securities market in any manner not to dispose of or alienate an asset forming part of a fraudulent and unfair transaction.

SEBI may even take the following action against an intermediary:

i. Issue a warning or censure;
ii. Suspend the registration of the intermediary;
iii. Cancel the registration of the intermediary.

13.2.5 Securities and Exchange Board of India (Research Analyst) Regulations, 2014

Timely and accurate information about investment products is an important ingredient for making investment decisions. However, considering the volume and complexity of information it would be difficult for an investor for analyzing and grasping the information. In this context the Research Analysts play an important role. They study Companies and industries, analyze raw data, and make forecasts or recommendations about whether to buy, hold or sell securities. They analyze information to provide recommendations about investments in securities to their clients. Investors often view analysts as experts and important sources of information about the securities they review and often rely on their advice.

However, such advice from investment analysts is many times prone to conflicts of interest that may prevent them from offering independent and unbiased opinions. Since the prime objective is to protect investors and enhance confidence in the market, it is a major concern of regulatory authorities to identify and deal with conflicts of interest arising from the production and dissemination of research reports. Indeed, the effort to address potential conflicts of interest affecting the production and dissemination of research by securities firms is truly a global one, with regulators in almost all developed market economies having proposed or implemented new rules for research related conflicts of interest.

Consensus, globally is that a regulatory framework is required to ensure impartial report, to address conflict of interest, to improve governance standards, to minimize market malpractices etc. IOSCO report on addressing conflicts of interest in September 2003 has prescribed principles as under:

- Mechanisms should exist so that analysts' trading activities or financial interests do not prejudice their research and recommendations.
- Mechanisms should exist so that analysts' research and recommendations are not prejudiced by the trading activities or financial interests or business relationships of the firms that employ them
- Reporting lines for analysts and their compensation arrangements should be structured to eliminate or severely limit actual and potential conflicts of interest.

- Firms that employ analysts should establish written internal procedures or controls to identify and eliminate, manage or disclose actual and potential conflicts of interest on the part of analysts.
- The undue influence of issuers, institutional investors and other outside parties upon analysts should be eliminated or managed.
- Disclosures of actual and potential conflicts of interest should be complete, timely, clear, concise, specific and prominent.
- Analysts should be held to high integrity standards.
- Investor education should play an important role in managing analyst conflicts of interest.

Accordingly SEBI (Research Analyst) Regulation 2014 have come into existence. These regulations set forth requirements to foster objectivity and transparency in security research and provide investors with more reliable and useful information to make investment decisions. Some of the important provisions of these regulations are defined here.

Regulation 3: Application for grant of certificate

On and from the commencement of these regulations, no person shall act as a Research Analyst or hold itself out as a Research Analyst unless he has obtained a certificate of registration from the Board under these regulations:

Provided that the Investment Advisers, Asset Management Companies, Proxy Advisory Service providers and fund managers of Alternative Investment Funds shall not be required to be registered under these regulations.

Provided further that the Investment Advisers, Asset Management Companies, Proxy Advisory Service Providers and fund managers of Alternative Investment Funds or their employees or directors who make public appearance or appear in public media for giving opinion or recommendations on security or on public offers or whose research report is circulated or distributed to public or general investors shall comply with Chapter III of these Regulations.

Regulation 7: Qualification and certification requirement

(1) An individual registered as a research analyst under these regulations and partners and representatives of an intermediary registered under these regulations offering research analysis services in securities shall have the following minimum qualifications, at all times:

(i) 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 provided by:

(a) a University which is recognized by University Grants Commission or by any other Commission/Council/Board/Body established under an Act of Parliament in India for the purpose or

(b) An institute/association affiliated with such University; or

(c) An institute/ Association/University established by the Central government or State government in India; or

(d) Autonomous institutes falling under administrative control of Government of India; or

(ii) Professional qualification or post-graduate degree or post graduate diploma which is accredited by All Indian Council for Technical Education, National Assessment and Accreditation Council or National Board of Accreditation or any other Council/Board/Body set up under an Act of Parliament in India for the purpose; or

(iii) professional qualification/post-graduate degree/post graduate diploma provided by a university/ institution /association which is recognized/ accredited by a foreign government or recognized/ accredited by any corporate/ institute which has been created/recognized by such foreign government for the purpose; or

(iv) A graduate in any discipline with an experience of at least five years in activities relating to financial products or securities or fund or asset or portfolio management.

(2) An individual registered as a research analyst and partners and representatives of intermediary registered under these regulations shall have, at all times, a NISM Certification Examination for Research Analysts as specified by the Board or other certification recognized by the Board from time to time.

Provided that the existing Research Analysts 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.

Regulation 8: Capital adequacy

(1) Research Analysts which are body corporates shall have a net-worth of not less than twenty five lakh rupees. Explanation.– For the purposes of this regulation, "net-worth" 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.

(2) Research Analysts who are individuals or partnership firms shall have net tangible assets of value not less than rupees one lakh: Provided that existing Research Analyst shall comply with the capital adequacy requirement within one year from the date of commencement of these regulations.

Regulation 9: Grant of certificate of registration

The Board on being satisfied that the applicant complies with the requirements specified in regulation 6 shall send intimation to the applicant and on receipt of the payment of registration/renewal fees as specified in Second Schedule, grant certificate of registration in Form B under First Schedule, subject to such terms and conditions as the Board may deem fit and appropriate.

Regulation 10: Period of validity of certificate

The certificate of registration granted under regulation 9 shall be valid for a period of five years from the date of its issue.

Regulation 11: Renewal of certificate

(1) Three months before the expiry of the period of validity of the certificate, the research analyst may, if he so desires, make an application in Form A for grant of renewal of certificate of registration.

(2) The application for renewal under sub-regulation (1) shall be dealt with in the same manner as if it were an application made under sub-regulation (2) of regulation 3 for grant of certificate.

Regulation 12: Procedure where registration is refused

(1) After considering an application made under regulation 3, if the Board is of the opinion that a certificate should not be granted to the applicant, it may reject the application after giving the applicant a reasonable opportunity of being heard.

(2) The decision of the Board to reject the application shall be communicated to the applicant within thirty days of such decision.

(3) Where an application for a certificate is rejected by the Board, the applicant shall forthwith cease to act as a research analyst. Provided that nothing contained in this regulation shall affect the liability of the applicant towards its existing clients under law.

13.3 Code of Conduct/Ethics for Research Analysts

Code of conduct as defined in the Schedule III of Research Analyst Regulations are:

1. ***Honesty and fairness***: Research Analyst shall act honestly, fairly and in the best interests of its clients and in the integrity of the market.
2. ***Diligence:*** Research Analyst shall act with due skill, care and diligence in the best interests of its clients and shall ensure that the research report is prepared after thorough analysis.
3. ***Conflicts of Interest:*** Research Analyst or intermediary shall avoid, manage conflict and make disclosure of conflicts or suitably address the same.
4. ***Insider Trading or front running:*** The Research Analyst or intermediary or employees of intermediary shall not engage in insider trading or front running or front running of its own research report.
5. ***Confidentiality***: Research Analyst or intermediary or its employees shall maintain confidentiality of report till the report is made public.
6. ***Professional Standard:*** The Research Analyst or the staff of the intermediary engaged in research analysis shall observe high professional standard while preparing research report.
7. ***Compliance:*** Research Analyst including its employees 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.
8. ***Responsibility of senior management:*** The senior management of a body corporate which is registered as Research Analyst shall bear primary responsibility for ensuring the maintenance of appropriate standards of conduct and adherence to proper procedures by the body corporate.

13.4 Disclosure Requirements for Research Analysts

Regulations requires clear, comprehensive and prominent disclosure of conflicts of interest in research reports and public appearances by research analysts. Disclosures of actual and potential conflicts of interest should be complete, timely, clear, concise, specific and prominent.

Regulations 19 demands following disclosures in Research Reports

(1) Research Analyst or an intermediary shall disclose in the research report the valuation methods used to determine the price target, if any, that has a reasonable basis and shall be accompanied by a disclosure concerning the risk that may impede achievement of the price target.

(2) Research Analyst or an intermediary that makes market in a securities in respect of a subject company, the fact shall be disclosed.

(3) Research Analyst or an intermediary shall disclose:

(i) If the research analyst or an intermediary of the research analyst's close relative has a financial interest in the debt or equity securities of the subject company, and the nature of such interest;

(ii) If the research analyst or an intermediary or its employees serves as an officer of the subject company

(iii) If the research analyst or any affiliate received compensation based upon the intermediary's other activities revenues in the previous 12 months;

(iv) If, the subject company currently is, or during the 12-month period preceding the date of publication or distribution of the research report, was, a client of the intermediary;

(v) If a research analyst or an intermediary has managed or co-managed a public offering or any takeover, buyback or delisting offer of securities for the subject company in the past 12 months and/or received compensation for investment banking or brokerage services from the subject company in the past 12 months;

(vi) If a research analyst or an intermediary expects to receive or intends to seek compensation for investment banking or brokerage services from the subject company in the next three months;

(vii) If a research analyst or an intermediary has any financial interest in the debt or equity securities of the subject Company and such interests aggregate to an amount equal to or more than 1% of the equity securities of the subject Company;

(viii) Any other material conflict of interest of the research analyst or intermediary that the research analyst or an associated person of the intermediary with the ability to influence the content of a research report knows or has reason to know at the time of the publication or distribution of a research report.

(4) All the disclosures under these regulation shall be made by a research analyst or an intermediary in public appearance.

(5) Research Analyst or an intermediary shall not be required to make a disclosure to the extent such disclosure would reveal material non-public information regarding specific potential investment banking or brokerage transactions of the subject company.

Sample Questions

1. **Unhealthy practice in the Securities Markets includes which of the following?**
   a. Disclosure
   b. Transparency
   c. Insider Trading
   d. Surveillance

2. **Which is the central bank in India with the responsibility of administering the monetary policy?**
   a. State Bank of India
   b. Reserve Bank of India
   c. Central Bank of India
   d. All of the above

3. **Which authority was set up with the primary responsibility of promoting old age income security by establishing, developing and regulating pension funds?**
   a. Association of Mutual Funds in India
   b. Insurance and Regulatory Development Authority
   c. Pension Fund Regulatory Development Authority
   d. Securities Exchange Board of India

4. **"The bye-laws of the stock exchanges are same across exchanges and need to be approved by SEBI". State whether True or False.**
   a. True
   b. False

ANNEXURE - 1

Case Studies (Some cases from history on market events)

Learning, unlearning and relearning is a continuous process. Further, one can learn from their own experiences or experiences of others. As life is too short to learn everything from one's own experiences and his circle of understanding and influence is anyway very tiny, it is wiser to learn from experiences of others and historical events, which are very well documented in the historical cases.

History, indeed, is a great teacher, especially in the Financial Markets. If one doesn't learn from historical events in Financial Markets, he tend to repeat those mistakes. However, it is also interesting to quote a great philosopher 'Mark Twain' here who stated "*We learn from the past that we don't learn from the past.*"

Couple of cases from the history are captured here for contemplation. Each of them would need a lot more research on the subject, if he/she intends to go into details of them:

Case 1 - Barings Episode:

The man behind the debacle, Nicholas Leeson, had well established track record of being a savvy operator in the derivatives market and was the favourite of the top management at the Barings' headquarters at London. He was the head - derivatives trading, responsible for both front and back office, at Barings Futures, Singapore (BFS), a subsidiary of Barings Plc., London.

Leeson engaged himself in proprietary trading on Tokyo Stock Exchange Index, Nikkei 225. He was operating simultaneously on Singapore Exchange – Derivatives Trading Ltd., (SGX – DT) (erstwhile Singapore International Monetary Exchange, SIMEX), Singapore and Osaka Securities Exchange (OSE), Japan in Nikkei 225 futures and options. A major part of Leeson's trading strategy involved the sale of options on Nikkei 225 index futures contracts. He had sold large number of options straddles (a strategy that involves simultaneous sale of both call and put options) on Nikkei 225 index futures. Without going into intricacies, it may be understood that this straddle position results in loss, if market moves in either direction (up or down) drastically. His strategy amounted to a bet that Japanese Stock Market would neither fall nor go up, substantially i.e. he had the stable price perspective towards Japanese Market.

The Japanese stock markets started falling on the news of a violent earthquake in Kobe, Japan. With futures on Nikkei 225 going down, his straddle position started incurring loss. In pursuit of profit from his straddles, he started supporting the index by building up extraordinarily huge long positions in Nikkei 225 futures on both the said exchanges SGX – DT and OSE. However,

the management of Barings was made to understand that Leeson was doing Nikkei 225 index futures arbitrage between SGX-DT and OSE.

When OSE authorities raised alarm about his huge long positions on the exchange in Nikkei 225 futures, he claimed that he had built up exactly opposite positions in Nikkei 225 on SGX - DT i.e. if his positions in Nikkei 225 at OSE suffer losses, these losses would get compensated by the profits of his positions at SGX - DT. Similar impression was given to the SGX - DT authorities, when they enquired about Leeson's positions.

Leeson kept giving misleading information to both the exchanges and neither of the exchanges bothered to crosscheck Leeson's positions on the other exchange because they were competing for business in Nikkei 225. Both the exchanges were more concerned about the protection of their financial integrity than anything else and so, allowed even the exceptionally large positions to Leeson after securing adequate margins.

The result is known to everyone. Single operator could not take the market in his desired direction and market fell down drastically. Resultantly, Barings blasted by registering losses on Leeson's both futures and straddle positions. But, we may see that its fire did not touch the financial integrity of either of the markets, SGX – DT or OSE because markets were absolutely safe through proper margining.

Issues behind the debacle & learning from the experience

1. Single operator can't move the market:

Leeson was trying to drive the prices in upward direction by buying index futures on Nikkei 225, but could not succeed as market was gripped in the negative sentiments generating from earthquake in Kobe. The point here is that single operator can't change the direction of the market and it is always prudent to live with the market movement, strategically. In the instant case, better strategy for Leeson would have been the dynamic management of his portfolio. For instance, with decreasing value of index, his put leg of the straddle started incurring losses (call was to expire worthless), and he had the choice to square his put options off at the pre-determined level (cut off loss strategy). Leeson, instead of squaring off his short put option position chose to support the index price through buying futures on Nikkei 225 and failed.

2. Traders should have clearly defined and well-communicated position limits:

Position limits mean the limits set by the top management for each trader in the trading organization. These limits are defined in various forms like with regard to a product, a market or trader's total exposure in the market etc. Any laxity at this front may result in unbearable

consequences to the trading organization. These limits should be clearly defined and well communicated to all traders in the organization.

3. Meticulous monitoring of the position limits is a must:

One can learn on research that Leeson too had position limits set by the top management, but, he crossed all of them. This attempt of outpacing limits by Leeson did not come to the notice of top brass at Barings as he himself was supervising the back office operations at BFS. It is understood that he had sent fictitious reports concerning his trading activities to the Barings' headquarters in London. Had the top management known the real position, probably, the disaster could have been avoided.

Therefore, scrupulous monitoring of the position limits is as important as setting them. Top management's job of monitoring the positions of each dealer in the dealing room may be facilitated by bifurcating the front and back office operations. Different people should be in charge of front and back office operations so that any exposure of dealers, over and above the limits set for them, can be detected immediately. This is the issue of having proper checks and balances at various levels to ensure that everyone in the organization has disciplinary approach and work within the set limits. In fact, trading systems should be capable enough to automatically disallow traders any enhancement in their exposures as soon as they touch their pre-determined limits.

4. Exchanges should share information on large positions:

Both the competing exchanges SGX – DT and OSE were not concerned about checking Barings' position at the other exchange. Well, both the exchanges were safe through margins, but everyone would appreciate that the effect of a big failure, like Barings, goes much beyond the financial integrity of a system. An important point to note is that the Exchanges should compete but at the same time co-operate and share the information, which may shake the entire financial system. Further, it is important from the point of view of deterring any price manipulation effort, which a member of two exchanges can make by using two independent systems.

5. Big Institutions are as prone to risk as individuals:

One broad issue from the overall market's perspective is that big Institutions are as prone to incurring losses in the derivatives market as any other individual. Therefore, irrespective of the entity, margins should be collected by the Clearing Corporation/ house and/ or exchange that too on time. Only, timely collection of the margins can protect the financial integrity of the market as seen in the Barings case.

Above-mentioned points 1 to 3 are relevant to the trading organizations in derivatives market. They have to intelligently work in-house to avoid any miss-happening like Barings at any point in time. Point 4 is relevant to the exchanges and they should work in collaborative manner and improve inter exchange communication and co-ordination. With regard to the point 5, SEBI has done a good job in the Indian derivatives market by making margins universally applicable to all categories of participants including Institutions. This provision will go a long way to create a financially safe derivatives market in India.

Conclusion

In view of the above, Barings episode may be summarized by stating that *"Barings' failure was not the derivatives failure, it was management's failure".* After the enquiries in Barings case, the Board of Banking Supervision's report also placed responsibility for the Barings' debacle on poor operational controls (operational risk) at Barings rather than the use of derivatives. Important learning from the entire episode is that we all have to have a disciplinary and self-regulatory approach. The moment, one go against this fundamental rule, this leveraged market may threaten his very existence and reduce him to absolute ashes.

Post Barings episode, operational risk became glaring and financial organizations across the world started clearly demarcating front and back office operations. Further, regulators drove the competing exchanges to work in a close manner and share information, which could threaten the existence of the financial markets. Also, in markets today, all positions, irrespective of the owner, are margined to recognize that institutions are as prone to risk as individuals. In nutshell, Barings episode taught significant stuff on operational risk front to the Financial Markets across the world.

Case 2 - Credit Event of 2008 and impact on Financial Markets

Let us hire a sales person in the Mortgage business in a bank. He have just joined on retail side with responsibility to drive the housing finance book of the bank. He spend time thinking and analyzing the data and recommend the following as strategy to fire up the sales/loan book:

- Bank may approach less credit worthy guys to expand the market.
- Bank may dilute Loan to Value (LTV) parameter to go say from 80:20 to 85:15 rule on lending (80% or 85% being loan amount against the value of asset).
- This could, indeed, expand bank's net interest margins (NIMs) as extending credit to less credit worthy guys would fetch the bank higher interest rates.

Assuming, the bank in pursuit of expanding its loan book, follows his said recommendations. Let's see what happens then.

Actually, the banks followed exactly the above thought process starting 2003-2004 to the culmination of credit event in 2008. Competing banks kept diluting their standards on loan to value ratio to tap the further lower credit quality customers. As higher margins were coming in, business looked quite attractive to the bankers. Only thing all bankers were ignoring was the risk of potential default on this loan book.

Whenever bankers were asked about the credit or default risk on the subject, they indicated towards the continuously increasing real estate prices. Argument was simple that if borrowers don't pay, we run little risk of recovery given the continuously rising prices of real estate. They never imagined the situation of real estate prices going down along with defaults on loan. It was a typical case of bankers taking view on real estate, which is not their job. Should we call it going beyond their jobs or call it complete disregard for the risk management on an asset portfolio (mortgage book).

Banking looked quite simple – put the liabilities and put the assets; keep growing the books with increasing Net Interest Margins (NIMs). Wow! But, then came the issue of supply of capital. To lend more, one needed to borrow more. Supply of capital became a constraint to the growth. Creative bankers found the solution in terms of selling some assets to get cash, which can be further lent. Bankers found it interesting to sell long dated mortgage assets to investors at a yield lower than their own yields. This means selling assets at premium to their face value. Good for the bankers as they recognized the profits on sale of long dated assets at the time of sale itself. This also meant higher bonuses for the bankers. Now, bankers found an interesting opportunity to generate assets, sell them at lower yield (book capital gains on that) to generate cash and further lend that cash to grow. Indeed, slowly and slowly they stopped bothering about the credit quality of mortgage buyers as long as there were investors in those originated mortgage assets available - a clear risk of moral hazard. For banks, mortgage business turned to be kind of fee based business from lending (balance sheet based business).

Let's understand perspective of house buyers/owners. They started looking at buying assets as call options (right to buy). They had very little or nothing at risk as competing banks were offering them almost 100% financing option. Their thought was quite clear and simple - If prices of assets go up, they could sell the house and repay to the bankers with some profits left for them; and, if prices of assets go down, they would turn the keys to the bankers. Clearly, there were lots of takers for the mortgages with this dynamics of finance.

As long as prices continue to climb, there was vibrancy all around. However, when prices of assets started to stumble, banks started encountering more and more defaults from the buyers/owners. It came like a falling pack of cards, when things turned bad.

Let's turn to the side of investors for mortgaged backed securities. Investors had money but no origination point. As banks had large machinery for origination of mortgages, it was a perfect marriage between banks and investors (funds). Banks would originate mortgages and turn the portfolio to funds at an origination price (discount on the mortgage rate). Investors also sold those assets to the other investors at lower yields and the process continued. Like in the game of passing the pillow, funds, which owned these mortgage assets last were the ones to be penalized by the event. They found themselves sitting on the assets, where prices fell sharply to couple of cents to the $ face value.

It is also interesting to touch rating of these mortgage backed securities. Credit rating agencies always believed in the great quality of these securities, specially, given the fact that these were backed by the hard assets and history on the subject. Most of these mortgage backed securities were accordingly rated highest grade (AAA kind of). Investors/funds of these papers relied heavily on the ratings by rating agencies in absence of their own capability or bandwidth to do the work on credit quality. Prima facie, we may also state that credit rating agencies did not understand the risks in these assets properly.

In addition to above all, there were lots of credit derivatives being written on these mortgaged backed securities by several institutions. Institutions were taking both trading and hedging positions on these securities in the credit derivatives market.

Learnings from the event:

Banks' attitude may be summarized as a perfect combination of aggression, competitive spirit, view on assets, complete disregard for risk management, moral hazard etc. etc. Banks, being a leveraged entity, must behave in a very disciplined manner all the time. They are into business of lending and not taking calls on the prices of assets. Also, risk management is the heart of the banking operations and competing banks should never dilute their risk management standards in pursuit of higher levels of business.

Investors should behave rationally. They should do their independent due diligence in addition to their reliance on third parties such as credit rating agencies. One question investors should ask continuously is "what could go wrong here."

While history is important, decisions can't be taken purely on the basis of historical data. Credit rating agencies relied heavily on the historical understanding of mortgage markets. While, one should learn from the past, current situation should be analyzed independently with facts and figures in hands. While credit rating agencies are liable to a large extent for 2008 event (highest

rating of these securities AAA kind off attracted many buyers and sellers to these securities), we never saw any credit rating agency in the world standing up to own the responsibility ever.

One more thing we learn from this event is that we should respect our limitations on understanding markets. As Dr. Nicholas Taleb mentions *"Black Swan events pose significant risk in this integrated world"*. Therefore, risk management should be paramount for institutions in all the situations.

Some more case studies:

Warren Buffett once stated ***"People with pen do much bigger thefts than the people with guns."*** Financial markets and businesses appear to be filled with many such stories. Many individuals in the world of business and finance found it difficult to resist the temptation of opportunities to cheat even at the cost of their own reputation and potential downfall.

Over the years, many promoters of "Wall Street darling companies" have breached the trust of the general public to satisfy their own hunger for money and power. Fund managers have also cheated their investors with the means beyond anyone's imagination. Here are some of the stories from the recent past for your contemplation.

Disgraced companies/institutions

Enron:

Enron was an incredibly energetic, innovative and creative company in power trading space. Allegations of massive accounting fraud wiped out $78 billion in stock market value of the energy company and resulted in its bankruptcy in 2001. Former President Jeff Skilling is serving a 24 years rigorous imprisonment in jail on charges of accounting frauds and manipulations.

WorldCom:

WorldCom, a telecom giant, also went through the manipulation of financials and fraud by its top management team. The 2002 fraud-induced bankruptcy of this company wiped out a firm that once had more than $100 billion in assets on its books. Former CEO Bernard Ebbers was convicted of fraud and is doing 25 years in federal prison.

Satyam Computers:

Promoter of Satyam, Mr. Ramalinga Raju confessed in 2009 that he had cooked up the accounts of Satyam Computers and that the cash and bank balances were inflated by ~Rs 5,000 crore, after a failed attempt to acquire promoters' owned another company Maytas. Investors lost

millions as the stock came crashing after the news was out. Mr. Raju was put behind bars with multiple charges including fraud and manipulation. Satyam Computers has since been acquired by Tech Mahindra.

Disgraced Fund Managers

Bernard Madoff:

New York money manager Bernard Madoff orchestrated $65 billion Ponzi scheme, largest financial fraud in the history of the United States, and got exposed in December 2008. In June 2009, 71-year-old Madoff was sentenced to 150 years in prison on 11 counts of fraud, money laundering and theft.

Michael Milken:

In the mid-1980s, Michael Milken of Drexel, an investment banking firm, was known as "Junk Bond King". But, insider trading brought the house down and left Drexel fighting bankruptcy. Milken was sentenced to 10 years in prison. He paid a significant $600 million fine.

Raj Rajaratnam:

In 1997, billionaire Sri Lankan-American businessman Raj Rajaratnam co-founded hedge fund management company Galleon Group. In October 2009, he was arrested and charged with several cases of insider trading. In October 2011, he received a sentence of 11 years in prison, pay a $10 million fine and order to relinquish assets worth ~$50 million.

ANNEXURE - 2

Suggested Readings

One common characteristic of all great investors is their habit of reading. They are "learning machines", a term coined by Mr. Charlie Munger of Berkshire Hathaway. Those of you who are seeking investing enlightenment are advised to read some great books on investments. Here is partial list of some of those gems:

- *A Random Walk Down Wall Street* by Burton Malkiel
- *Common Sense on Mutual Funds* by John Bogle
- *What Has Worked in Investing* by Tweedy, Browne
- *The New Finance, the Case Against Efficient Markets* by Robert Haugen
- *The Intelligent Investor* by Benjamin Graham
- *Security Analysis* by Graham and Dodd
- *The Millionaire Next Door* by Thomas Stanley and William Danko
- *Common Stocks and Uncommon Profits* by Phil Fisher
- *The Essays of Warren Buffett edited* by Larry Cunningham
- *The Snowball: Warren Buffett and the Business of Life* by Alice Schroeder
- *Tap Dancing to Work: Warren Buffett on Practically Everything* by Carol Loomis
- *Poor Charlie's Almanack: The Wit and Wisdom of Charles T. Munger – collection of speeches of Charlie Munger*
- *Deep Simplicity* by John Gribbin
- *Models of My Life* by Herb Simon
- *Influence: The Psychology of Persuasion* by Robert B. Cialdini
- *Autobiography of Benjamin Franklin*
- *Living within Limits: Ecology, Economics, and Population Taboos* by Garrett Hardin
- *The Selfish Gen*e by Richard Dawkins
- *Titan: The Life of John D. Rockefeller*, Sr. by Ron Chernow
- *The Wealth and Poverty of Nations: Why Some Are So Rich and Some So Poor* by David S. Landes
- *The Warren Buffett Portfolio: Mastering the Power of the Focus Investment Strategy* by Robert Hagstrom
- *Getting It Done: How to Lead When You're Not in Charge* by Roger Fisher and Alan Sharp
- *Three Scientists and Their Gods: Looking for Meaning in an Age of Information* by Robert Wright

ANNEXURE - 3

Reference Reports, Databases and Websites

There are unlimited number of references on the web for research work and investment knowledge/wisdom. Google search continues to be one of the most powerful tool for information on research reports.

Some of the relevant reports, databases and websites in the Indian context are:

- Stock Exchanges – Research Reports on stock exchanges websites
- Credit Rating Agencies – Credit Research Reports on rating agencies websites
- Databases – Capitaline, Prowess, Ace, etc.
- Independent Research Reports by various service providers
- www.capitalideasonline.com
- www.myiris.com
- www.moneycontrol.com
- www.smartinvestor.business-standard.com/
- www.business-standard.com/markets
- www.financialexpress.com/
- www.hindubusinessline.com/
- www.safalniveshak.com/ and similar other websites[1]

[1] Please note that this is only an illustrative list provided for reference purposes to readers.

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