



॥ सरस्वती नः सुभगा मयस्करत् ॥

Uttar Pradesh Rajarshi Tandon
Open University

M.Com-403

Security Analysis and Portfolio Management

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BLOCK

1

UNIT-1

Nature and Scope of Investment Decisions

UNIT-2

Components of Investment Risk

UNIT-3

Valuation of Securities

UNIT-4

The Dynamic Valuation Process

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BLOCK INTRODUCTION

In **Block-1** you have learnt about the security analysis and portfolio management; nature and scope of investment decisions, components of investment risk, valuation of securities and the dynamic valuation process.

Unit-1 discusses about nature and scope of investment decisions- nature of investment decisions the investment decision process, the investment environment, financial instruments, financial intermediaries, and financial markets.

Unit-2 explains components of investment risk; concept of investment risk, evolution of risk connotations, the interest rate risk factor, the market risk factor, the market risk factor, the inflation risk factor, the default risk factor, the management risk factor, and the liquidity risk factor.

Unit-3 deals with valuation of securities; the three-step valuation process, economy influences, industry influences, empirical support for the valuation sequence, the general valuation framework, the basic valuation model, value price relationship, and the counter hypothesis.

Unit-4 deals with the dynamic valuation process, valuation of fixed income securities, estimating returns on fixed income, securities valuation of preference shares, valuation of equity shares, the present value of expected stream of benefits from equity shares, dividend valuation model and the P/E approach to equity valuation.

UNIT-1 NATURE AND SCOPE OF INVESTMENT DECISIONS

UNIT FRAMEWORK

- 1.1 Purpose
- 1.2 Nature and Scope of Investment Decision
- 1.3 Investment Decision Process
- 1.4 Investment Environment
 - 1.4.1 Financial Instruments
 - 1.4.2 Financial Intermediaries
 - 1.4.3 Financial Markets
- 1.5 Summary
- 1.6 Self-Assessment Question
- 1.7 References

1.1 PURPOSE

The objectives of this unit are:

- To discuss the nature of investment decision
- To explain the process involved in investment decision
- To discuss the investment environment, alternatives and markets.

1.2 NATURE AND SCOPE OF INVESTMENT DECISION

Money has an open door cost and when you choose to contribute it you are denied of this chance to gain an arrival on that money. Likewise, when the general cost level raises the obtaining intensity of money decays - bigger the expansion in swelling, the more prominent the exhaustion in the purchasing influence of money. This clarifies the motivation behind why people require a 'genuine rate of return' on their speculations. Presently, inside the substantial group of financial specialists, some purchase government securities or store their cash in ledgers that are satisfactorily anchored. Interestingly, some others like to purchase, hold, and

move value shares notwithstanding when they realize that they get presented to the danger of losing their significantly more than those putting resources into government securities. You will find that this last gathering of financial specialists is progressing in the direction of the objective of getting bigger returns than the principal gathering and, all the while, does wouldn't fret expecting more serious hazard.

You will find that this last gathering of speculators is moving in the direction of the objective of getting bigger returns than the principal gathering and, simultaneously, does wouldn't fret accepting more serious hazard. Financial specialists, when all is said in done, need to gain as extensive returns as conceivable subject; obviously, to the dimension of hazard they can hold up under. The hazard factor gets completely showed in the buy and clearance of budgetary resources, particularly value shares. Usually learning that a few financial specialists lose notwithstanding when the securities markets blast. So there are untruths the hazard. You may comprehend hazard, as the likelihood that the genuine profit for a speculation will be unique in relation to its normal return. Utilizing this meaning of hazard, you may order different ventures into hazard classes. Along these lines, government securities would be viewed as hazard free ventures in light of the fact that the likelihood of real return separating from expected return is zero. On account of debentures of an organization like TELCO or GRASIM, again the likelihood of the real return being unique in relation to the normal return would be almost no in light of the fact that the possibility of the organization defaulting on stipulated intrigue and important reimbursements is very low. You would clearly put value partakes in the class of 'high hazard venture for the straightforward reason that the real return has an incredible shot of varying from the normal return over the holding time of the financial specialist, which may run from one day to a year or more. Investment choices are prefaced on a vital suspicion that financial specialists are objective and thus incline toward assurance to vulnerability. They are hazard opposed which suggests that they would be reluctant to go out on a limb only for hazard. They would expect chance just if a sufficient remuneration is approaching and the decree of 'soundness joined with the frame of mind of 'chance rendition' bestows to ventures their fundamental nature. The inquiry to be addressed is: how best to augment comes back with a given dimension of hazard? Or on the other hand, how do best to decrease hazard for a given dimension of return. Clearly, there would be a few unique dimensions of dangers and diverse related desires for return. The fundamental venture choice would be an exchange off among hazard and return.

1.3 INVESTMENT DECISION PROCESS

Investment process gives you a technique of accomplishing the over two destinations. A great deal of arranging is required while putting your well-deserved cash in securities. Regularly financial specialists lose cash when they make speculations with no arranging. They settle on rushed venture choice when the market and economy was at its pinnacle dependent on some suggestion. Some of you may have contributed amid auxiliary market blast of 1992 and essential market blast of 1994-95. Numerous financial specialists of those occasions are yet to recoup their misfortunes. In the year 1999-2000, financial specialists of a few

programming stocks, both in essential and optional market, have lost intensely. In every one of these cases, the issue is absence of arranging and to a broaden ravenousness. Both are bad to make a better than average rate of profitability. A regular speculation choice experiences a five-advance method, which thus frames the premise of the venture procedure.

These are the following steps:

1. Determination of Investment Objectives and Policy
2. Security Analysis
3. Construction of Portfolio
4. Review of Portfolio
5. Evaluation of Portfolio Performance

- 1. Determination of Investment Objectives and Policy-** The financial specialist should work out his venture goals first and after that advance a strategy with the measure of investible riches at his direction. A speculator may state that his goal is to have 'extensive cash'. You will concur this would be an incorrect method for expressing the goal. You would review that the quest for 'substantial cash' is beyond the realm of imagination without the danger of vast misfortunes. The goal ought to be in clear and explicit terms. It tends to be communicated as far as anticipated return or anticipated hazard. Assume, a speculator can expect to gain 10% return against the hazard free rate of 8%. It implies the speculator will accept some measure of hazard while making venture. On the other hand, the financial specialists can setter or his inclination on hazard by expressing that the danger of venture ought to be underneath market chance. In explicit terms, she or he can say that beta of the portfolio must be 0.80. On the off chance that the investor characterizes one of the two parameters of venture (return or risk), it is conceivable to locate the other one on the grounds that a clear relationship exists between the two in the market. It may not be feasible for you to characterize both return and hazard since it may not be attainable.

The subsequent stage in figuring the speculation arrangement of a speculator would be the recognizable proof of classifications of monetary resources he/she would be keen on. Clearly this thus, would rely upon the goals, measure of riches and the expense status of the financial specialist. For instance, an expense absolved speculator with substantial investible riches like an annuity/provident reserve would put resources into anything other than assessment excluded securities except if constrained by law to do as such. A few speculators may totally maintain a strategic distance from subordinates in light of high hazard related with such ventures. A few financial specialists may put more in values to procure higher return yet use subordinates to lessen extra hazard. As in purchaser items, money related items additionally accompany distinctive hues and flavors and one must be exceedingly proficient before choosing proper securities.

2. **Security Analysis-** Security Analysis after characterizing the venture objective and extensively setting the extent of riches to be contributed under various classifications, the subsequent stage is choosing singular securities under every class. For example, if a financial specialist sets half of her/his riches to be put resources into government securities, the following inquiry is which of the administration securities that the ventures ought to be made. It ought to be noticed that not all administration securities are one and the equivalent. A long haul government bond is a lot less secure than transient bonds. Additionally, interest in values requires ID of organizations stocks, in which the speculation can be made. Security examination is regularly performed in a few phases. The primary stage, called monetary investigation, would be helpful to set wide speculation objective. In the event that the economy is relied upon to do well, financial specialist can put more in stocks. Then again, if the monetary log jam is relied upon to proceed with, financial specialist can put less in stocks and more in bonds. In stage two, speculators commonly look at the ventures and recognize the businesses, in which venture can be made. There are a few groupings of industry, which we will talk about in a different unit. Speculations require not be made in any one explicit industry on the grounds that a considerable lot of the stocks might be overrated in a development industry. It is smarter to search for three to five businesses and it relies upon person's decision. The issue is an investigation of expansive patterns of industry and future standpoint is fundamental to continue further on security examination. As the last advance, one needs to investigate the basics of explicit organizations and discover whether the stock is alluring for speculation. At this stage, financial specialists need to coordinate the hazard return target she/he has set in the past stage. Organization explicit investigation incorporates examination of chronicled money related data and additionally future standpoint. Utilizing authentic execution and future standpoint, explicitly the future money streams are anticipated and limited to introduce esteem. Through such investigation, examiners evaluate the natural estimation of the stock and contrast the equivalent and current market cost. On the off chance that the inborn esteem is more prominent than the present market value, the stock meets all requirements for venture. For example, if a speculator dependent on her/his comprehension and estimation of money streams finds the inherent estimation of Hindustan Lever is Rs. 500 against its market cost of Rs. 450, at that point the stock fits the bill for speculation. Comparative examination must be improved the situation different stocks as well. Since countless are exchanged the market, it might be hard to perform such examination for all stocks. Regularly, financial specialists utilize certain conditions to decrease the quantity of stocks for such investigation. Notwithstanding, before putting resources into the stock, the financial specialist might want to analyze whether the stock fits into the hazard return profile that was laid out before.
3. **Construction of Portfolio-** In earlier stage, investors normally analyze the enterprises and distinguish the ventures, in which speculation can be

made. There are a few orders of industry, which we will talk about in a different unit. Speculations require not be made in any one explicit industry on the grounds that a large number of the stocks might be overrated in a development industry. It is smarter to search for three to five businesses and it relies upon person's decision. The issue is an examination of expansive patterns of industry and future standpoint is basic to continue further on security investigation. As the last advance, one needs to investigate the basics of explicit organizations and discover whether the stock is alluring for venture. At this stage, financial specialists need to coordinate the hazard return target she/he has set in the past stage. Organization explicit investigation incorporates examination of authentic monetary data and additionally future standpoint. Utilizing chronicled execution and future viewpoint, explicitly the future money streams are anticipated and limited to show esteem. Through such examination, experts evaluate the characteristic estimation of the stock and contrast the equivalent and current market cost. On the off chance that the inborn esteem is more prominent than the present market value, the stock meets all requirements for speculation. For example, if a financial specialist dependent on her/his comprehension and estimation of money streams finds the natural estimation of Hindustan Lever is Rs. 500 against its market cost of Rs. 450, at that point the stock fits the bill for venture. Comparative investigation must be improved the situation different stocks as well. Since an extensive number of stocks are exchanged the market, it might be hard to perform such investigation for all stocks. Ordinarily, speculators utilize certain conditions to lessen the quantity of stocks for such investigation. Be that as it may, before putting resources into the stock, the financial specialist might want to inspect whether the stock fits into the hazard return profile that was delineated earlier. In the past stage, bonds and stocks, which satisfy certain conditions, are distinguished for ventures. Under portfolio development arrange, the financial specialist needs to dispense the riches to various stocks. A few standards guide such portion of riches. Speculators need to value that the danger of portfolio descends if the portfolio is broadened. Expansion here doesn't mean more than one stock however stocks whose future execution are not exceptionally connected. Further, a lot of broadening or an excessive number of stocks may likewise make issue as far as observing. For instance, if the financial specialist chooses to put 10% of the riches in programming segment, it is alluring to confine the interest in a few stocks dependent on the measure of venture. Then again, in the event that she/he puts resources into 20 programming stocks, the portfolio will turn out to be excessively substantial and make down to earth issue of checking. While incorporating stocks in the portfolio, the financial specialist has to watch its effect on the general portfolio return and hazard and furthermore inspect whether it is reliable with the underlying venture objective. Portfolio development isn't done once for all. Since speculators sparing occur over some undefined time frame, portfolios are likewise developed over some undefined time frame. It is a nonstop exercise. At some point, timing of venture might be basic. For example, if a financial specialist spares Rs. 50,000 amid the main quarter and the ideal portfolio

incorporates the two securities and stocks, the issue before the speculator is whether the sum must be utilized for securities or stocks or both. It requires some further examination by then of time. Be that as it may, throughout the years, when the amassed ventures develop to certain dimension, consequent yearly speculations as an extent of aggregate speculations will wind up littler and henceforth the planning issue will end up minor choice.

4. **Review of Portfolio-** Under portfolio development, financial specialist is coordinating the hazard return attributes of securities with the hazard return of venture objective. Under two conditions, the securities, in which venture was made before, require liquidation and putting the sum in another security. The hazard or expected return of the security may have changed over some undefined time frame when the business condition changes. For example, the product division, which was demonstrating 100% development between 2010-2015 has abruptly turned out to be hazardous after the U.S. stoppage. Numerous bleeding edge organizations have reconsidered their evaluated income development from 100% to 40%. The stock may likewise turn out to be less hazardous yet offer lower return. That is, the point at which the risk returns qualities of securities change, it will influence the ideal hazard return attributes of portfolio and consequently requires a correction of arrangement of stocks. Another purpose behind moving a few of the securities in the portfolio and purchasing another one in its place is an adjustment in venture objective. For example, when you are youthful and have less family responsibilities, at that point your venture goal may go for higher return regardless of whether it adds up to higher risk. You may put a greater amount of your reserve funds in value stocks and subsidiaries. At the point when your family develops, you should need to decrease the hazard and change the venture objective. Arrangement of securities must be changed to mirror your new speculation objective. There is one more explanation behind modification, which we examined prior. At the point when the full scale monetary condition transforms, you might need to move some portion of your venture from value to obligation or the other way around relying upon the future financial standpoint.
5. **Evaluation of Portfolio Performance-** The estimation of your venture changes over some stretch of time and it mirrors the present market estimation of the securities in the portfolio. For example, on the off chance that you have made some interest in Hindustan Lever somewhere in the range of 10 years back, when you originally begun contributing, the estimation of HLL today is a few times more than its esteem exactly 10 years back. Hardly any stocks could have brought about a misfortune and it is hard to develop an arrangement of stocks just with champ stocks. Portfolio return mirrors the net effect of positive and negative returns of individual securities in the portfolio. Toward the finish of every period, you may jump at the chance to process the portfolio return and hazard and contrast the equivalent and your speculation objective and in addition

certain benchmark chance return. The goal of this activity is to assess the effectiveness in development and the executives of portfolio.

1.4 INVESTMENT ENVIRONMENT

Investment environment can be characterized as the current investment vehicles in the market accessible for speculator and the spots for exchanges with these venture vehicles. Speculation choices to purchase/move securities taken by people and organizations are helped through a lot of tenets and controls. There are markets - cash and capital - that work subject to such guidelines and built up systems and are, thusly, managed by lawfully established expert. At that point there are securities or monetary instruments which are the objects of procurement and deal. At last, the system, which assists exchanges starting with one proprietor then onto the next, involves a large group of go-betweens. Every one of these components contain the speculation condition. Financial specialists must be completely mindful of this condition for settling on ideal speculation choices. Exchange in the accompanying passages gives a short diagram of the three components of the investment environment viz., instruments, middle people, and markets:

1.4.1 FINANCIAL INSTRUMENTS

Financial instruments can be characterized in an assortment of ways. We will arrange them into obligation and value securities based on the idea of the purchaser's dedication. Debt instruments can be issued by open bodies and governments and furthermore by private business firms.

1.4.1.1 PUBLIC DEBT INSTRUMENT

Government issues obligation instruments for long and brief periods. They are evaluated the best as far as quality and are without hazard. A typical term used to assign them is 'plated edged-securities'. The 182-day treasury bills issued by the Government of India are instances of transient instruments. Government likewise obtains, cash for long-term and 11.5 percent Loan 2009 (V issue) of the Government of India is a case of long haul instruments. State governments and nearby bodies additionally issue arrangement of advances and bonds. Banks, protection, benefits and provident assets, and a few different associations purchase government obligation instruments in consistence with their statutory commitments. Such obligation instruments are more often than not over-bought in. You can allude currency advertise page of any of the money related dailies, where you can discover the rundown of present moment and long haul securities that were purchased and sold on a specific day.

1.4.1.2 PRIVATE DEBT INSTRUMENT

These are issued by private business firms, which are consolidated as organizations under the Companies Act, 1956. For the most part these instruments are anchored by a home loan on the settled resources of an organization. Notwithstanding plain obligation instruments, there are a few varieties. An

exceptionally prominent assortment of such debentures is 'convertible' whereby either the entire or a piece of the standard estimation of a debenture is convertible (either naturally or at the alternative of speculators) on the expiry of a stipulated period after issue. The terms of transformation are expressed ahead of time. There might be a progression of changes and transformation cost may vary from period to period. Select Indian organizations are presently raising transient assets by issuing an obligation instrument known as Commercial paper (CP). The Reserve Bank of India has issued nitty gritty rules in January 1990 in such manner. They are contained in "Non-Banking Companies (Acceptance of Deposits through the Commercial Paper) Directives, 1989". The qualifications for going into the CP advertise depends on straightforward standard, which organizations themselves, can promptly survey. These conditions were loose in April 1990.

1.4.1.3 SPECIAL DEBT INSTRUMENT

With a view to wipe up assets and advancing the range of obligation instruments, two new obligation instruments merit a unique notice viz., Public Sector Undertaking (PSU) Bonds (long haul) and Certificate of Deposit (present moment). The PSU bonds are issued to the overall population and money related organizations by open division endeavors, as a rule with expense impetus. It is intriguing to take note of that an extensive extent of PSU bonds is secretly put with banks, their backups, and monetary organizations. Authentications of Deposits (CDs) were presented in June 1989. Business banks are allowed to issue CDs inside a roof equivalent to 2 percent of their fortnightly normal exceptional total stores. The development of 3 months at the short-end and one-year at the introvert end was commonly famous with financial specialists. Loan costs for CDs are ordinarily higher than the financing cost offered by the bank for comparable development period stores.

1.4.1.4 OWNERSHIP SECURITIES

These instruments are called 'equities' because investors who invest in them get a right to share residual profits. Equity investment may be acquired indirectly or directly or even through a hybrid instrument known as preference shares. They are discussed in this order.

1.4.1.5 INDIRECT EQUITIES

The speculator procures uncommon instruments of establishments, who take the purchase move choices for financial specialists. Such establishments are Unit Trust or Mutual Funds. A person who purchases Unit gets a profit from the salary of the Trust/Mutual Fund in the wake of meeting all costs of the board. The Units can be purchased from and sold to the establishment at deal and repurchase costs reported now and again (every day). Numerous shared finances plans are additionally recorded in stock trades and financial specialists can likewise move and buy the Units through auxiliary markets. The goal of Trusts and Mutual Funds is to utilize their expert mastery in portfolio development and pass on the advantages to the little financial specialist who can't rehash such an execution whenever left alone to buy in to value shares specifically.

1.4.1.6 DIRECT EQUITIES

The speculator can buy in specifically to the value issues set available by the new organizations or by the current organizations. On the off chance that she/he is now an investor of a current organization, which enters the capital market for extra issue of value shares, such a financial specialist would get a master rata appropriate to buy in, on a pre-emptive premise, to the new issue. Such contributions are known as 'rights shares'. Set up organizations' reward their investors as 'extra offers' also. They are given out of the collected stores and investors require not pay any money thought as occurs on account of 'right offers'. For instance, an organization may report a reward issue on a one-for-one premise. This adds up to a 100 percent reward issue (or, freely stock profit) with the goal that the quantity of offers held by an investor after the reward would be multiplied. The odds for an expansion in the potential profit salary turn out to be brilliant and this would happen except if the organization forces a proportionate cut in future profits. Accordingly, an investor, who held 100 offers of Rs. 10 each in an organization, got a profit salary of Rs. 200, the profit declared being 20 percent, his shareholding after a 100 percent reward currently increments to 200. Presently, if the organization keeping up indistinguishable rate of profit from a year ago viz., 20 percent, the profit pay of the investor would go up to Rs. 400. He will, obviously, get just Rs. 200 even after the reward if the organization prunes the profit to 10 percent.

1.4.2 FINANCIAL INTERMEDIARIES

Money related mediators play out the intermediation work i.e., they bring the clients of assets and the providers of assets together. A significant number of them issue money related cases against themselves and use money continues to buy the budgetary resources of others. The Unit Trust of India and other shared assets have a place with this classification. Most money related foundations guarantee issues of capital by non-administrative open restricted organizations notwithstanding specifically buying in to such capital either under an open issue or under a private situation. In 1992, SEBI required all value issues were to be endorsed completely however this necessity was pulled back thusly. The level of guaranteeing has descended considerably after the withdrawal of this prerequisite. While great issues require no endorsing, guarantors are not willing to guarantee awful issues. Table 13 demonstrates the changing patterns in endorsing. The money related organizations occupied with delegate exercises incorporate the Industrial Development Bank of India, Industrial Finance Corporation of India, Industrial Credit and Investment Corporation of India, Unit Trust of India, Life Insurance Corporation, and General Insurance Corporation. Two foundations, which have widened money related administrations exercises in India, merit a unique notice. They are: The Credit Rating Information Services of India Ltd., (CRISIL) and other FICO assessment organizations, and the Stockholding Corporation of India Ltd. (SHCIL). CRISIL, the primary FICO score organization of the nation, was set up together by ICICI, UTI, LIC, GIC, and Asian Development Bank. It began activities in January 1988 and has appraised countless instruments and open stores of organizations. CRISIL evaluations give a manual for financial specialists with regards to the danger of auspicious

installment of intrigue and key on a specific obligation instruments and inclination shares on receipt of demand from an organization. Appraisals identify with an explicit instrument and not to the organization as a whole. They depend on elements like industry hazard, advertise position and working productivity of the organization, reputation of the executives, arranging and control framework, bookkeeping, quality and money related adaptability, gainfulness and budgetary position of the organization, and its liquidity the board. The SHCIL was supported by IDBI, IFCI, ICICI, UTI, LIC, GIC and IRBI to present a book passage framework for the trans fix of offers and different sorts of scraps supplanting the present framework that includes voluminous printed material. The corporation commenced its tasks in August 1988. Initiating its tasks with UTI, SHCII has now stretched out its activities to GIC, LIC shared reserve, and New India Assurance Co. Ltd.

1.4.3 FINANCIAL MARKETS

Securities markets can be viewed as essential and auxiliary. The essential market or the new issues showcase is a casual discussion with national and even worldwide limits. Anyone who has reserves and the tendency to put resources into securities would be viewed as a piece of this market. People, trusts, banks, common assets, money related foundations, benefits reserves, and so far as that is concerned any substance can take an interest in such markets. Organizations enter this market with introductory and ensuing issues of capital. They are required to pursue the rule endorsed by the controlling offices like SEBI now and again except if they are explicitly exempted from doing as such. An outline or an announcement in-lieu of plan is an essential necessity since this contains all material data based on which the financial specialist would shape judgment to put or not to put his cash. Camouflage and distortions in these reports have genuine lawful ramifications including the abrogation of the issue. A few organizations would utilize the essential market by utilizing their 'in house' expertise yet the greater part of them would utilize specialists, broking and guaranteeing firms, issue administrators, lead supervisors for arranging and observing the new issue. New rules issued by the Securities and Exchange Board of India (SEBI), presently, require the mandatory arrangement of an enrolled vendor broker as issue supervisor where the measure of the capital issue surpasses Rs.50 lakhs. Optional markets or stock trades are set up under the Securities Contracts (Regulation) Act, 1956. They are known as perceived trades and work inside areas that have systems of correspondence, programmed data checks, and other motorized frameworks. Individuals are conceded against buy of a membership card whose official costs differ as indicated by the size and status of the trade. Enrollment cards for the most part order high informal premia in light of the fact that the quantity of individuals isn't actually expandable. Business was before executed on the exchanging floor inside authority working hours under the open offer framework. Today, all trades in India have presented screen-based exchanging where the individuals from the trade execute the business (buy and closeout of securities) through work stations. You can visit the closest NSE representative's office to end up how exchanging happens. Techniques for chronicle and settlement are set down ahead of time and individuals are

committed to tail them. Assertion methodology exists for the goals of debate. The administrative instrument identifying with capital market has seen real changes amid the most recent ten years. The Securities and Exchange Board of India (SEBI) is currently dependable to screen and control the stock exchange activities, new capital issues, working of common assets, vendor brokers and different go-betweens. SEBI has issued separate rules for every one of the above substances and requires every one of the go-betweens to enroll with the SEBI and occasionally present the reports on their tasks.

1.5 SUMMARY

People spare a piece of their profit to meet their future income needs. Such reserve funds are frequently put resources into securities since cash has a period esteem. Ventures ordinarily offer a positive return, which regularly is more than rate of swelling. Such a positive return is a motivation for people to build the dimension of reserve funds and help the nation by making new capital. People before making speculations need to comprehend the fundamental standards of ventures. While this course intends to give a far reaching contribution on speculations, this unit gives a diagram of the subject. A portion of the vital issues canvassed in this unit are:

- 1) Securities are of various sorts and the normal come back from such securities contrasts extensively. Government securities offer most reduced return however they are likewise chance free. Values offer most extreme return however they are excessively hazardous. Risk and return of securities go together.
- 2) The beginning stage of investment process is obviously characterizing the investment goals. Investment targets are communicated as far as anticipated return or hazard and time of holding. Security investigation is performed to recognize securities, which fit the bill for investment. Following the standards of portfolio the board, securities are consolidated to accomplish enhancement. Portfolios are occasionally changed and execution of dealing with the portfolio is additionally intermittently assessed.
- 3) Notwithstanding knowing the fundamental standards of investment, an investor is likewise required to know the tasks of securities advertise. Distinctive sorts of securities are exchanged the market and they are comprehensively ordered into debt and equity instruments. They are purchased and sold through a lot of mediators, which incorporate dealers, stock trades, and so on. All securities exchange mediators are directed by the SEBI to guarantee methodical working of the market.
- 4) Securities markets can be viewed as essential and auxiliary. Organizations enter this market with introductory and ensuing issues of capital. SEBI is currently dependable to screen and control the stock exchange activities, new capital issues, working of common assets, vendor brokers and different go-betweens.

1.6 SELF-ASSESSMENT QUESTION

- Q.1.** Define investment decision process.
- Q.2.** Describe the process involved in investment decision.
- Q.3.** Briefly describe the economic environment.
- Q.4.** Distinguish the following:
- a. Debt and equity instrument
 - b. Risk and risk free investment
- Q.5.** State and explain the effect of changes in investment environment on investment decisions.
- Q.6.** Why should portfolio be continually evaluated?
- Q.7.** Tick the correct alternative in the following:
- A)** All risk-averse investors crave for maximum wealth. (True/False)
 - B)** Risk is the probability of actual return diverging from expected return. (True/False)
 - C)** A non-member cannot operate on the trading floor of recognized stock exchange. (True/False)
 - D)** Preference shares are equities. (True/False)
 - E)** All public sector bonds provide tax-free interest. (True/False)
 - F)** CRISIL provides comprehensive financial consultancy to those who approach it. (True/False)
 - G)** Financial institutions do not directly subscribe to the shares and debentures of companies. (True/False)
 - H)** A registered merchant banker must be appointed as a manager for a new issue exceeding Rs. 50 lakhs. (True/False)
 - I)** An ex ante return is the return, which has been planned or expected. (True/False)
 - J)** Investment decisions are concerned only with financial assets. (True/False)
 - K)** When an individual invests he commits his funds with an expectation to obtain an adequate return (True/False)
 - L)** A rational investor maximizes his current and future wealth (True/False)
 - M)** Investors do not care for the real rate of return and ignore Inflation. (True/False)

- N) All investors require an abnormal compensation even for low levels of risk. (True/False)
- O) Investible funds have an opportunity cost which influences the investor's required return. (True/False).
- P) Some investors will not accept any risk whatsoever but some others would be virtual dare-devils. (True/False)
- Q) Equity shares are less risky than debentures. (True/False)

Q.8. Briefly describe the investment environment.

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UNIT-2 COMPONENTS OF INVESTMENT RISK

UNIT FRAMEWORK

- 2.1 Purpose
- 2.2 Concept of Investment Risk
- 2.3 Evolution of Risk Connotation
- 2.4 The Interest Rate Risk Factor
- 2.5 The Market Risk Factor
- 2.6 The Inflation Risk Factor
- 2.7 The Default Risk Factor
- 2.8 The Management Risk Factor
- 2.9 The Liquidity Risk Factor
- 2.10 Summary
- 2.11 Self-Assessment Question
- 2.12 References

2.1 PURPOSE

The objectives of this unit are:

- To discuss the concept of investment risk
- To explain the evolution of risk connotations
- To discuss the different components of investment risk factors

2.2 CONCEPT OF INVESTMENT RISK

Investment risk can be defined as the probability or likelihood of occurrence of losses relative to the expected return on any particular investment. Stating simply, it is a measure of the level of uncertainty of achieving the returns as per the expectations of the investor. It is the extent of unexpected results to be realized. Risk is an important component in assessment of the prospects of an investment. Most investors while making an investment consider less risk as

favorable. The lesser the investment risk, more lucrative is the investment. However, the thumb rule is the higher the risk, the better the return.

2.3 EVOLUTION OF RISK CONNOTATION

In the last decades the connotations of risk have become increasingly negative, risk equals dangers and hazards. Another explanation for the negative connotation can be found in risks relation to the term hazard. Hazard has evolved from the Arabic *al zahr*, which means the dice. The term “technological risk” was initially associated with the occurrence of unwanted circumstances (e.g. leading to accidents) which are both possible and probable. “Possible” expresses the fact that these circumstances are known and enumerable; “probable” means that these circumstances may arise in the future. These circumstances are described, for instance, by combinations of events or by sequences of events (scenarios), or both. In the context of safety, the considered circumstances inevitably lead to harmful events (accidents) when these circumstances arise (the deterministic approach to risk assessment). If all the circumstances are known, treatments can be defined a priori. Barriers prevent the occurrence of accidents by avoiding the occurrence of undesirable combinations or by neutralizing dreaded sequences of events. In this paradigm, safety is defined by the absence of such circumstances and by the absence of accidents, and is guaranteed by the presence of risk controls (barriers).

We are currently facing a challenge to this founding paradigm of risk and safety, having to admit that the circumstances (such as initiating events and scenarios) which may lead to accidents are uncertain and potentially infinite. Our ignorance of causes (circumstances), effects (harms) and their relationships is primarily quantitative in nature. This ignorance concerns, for instance, the difficulty in determining the probability of occurrence of events (causes and effects), the effectiveness of the barriers and the severity of consequences. Our ignorance is also, even more importantly, qualitative. This concern, for example, our inability to establish an exhaustive list of circumstances which may lead to accidents, as this list is not finite in complex systems. Similarly, the nature of the effects of certain circumstances (in particular medium- and long-term effects) cannot be predicted given the state of knowledge (e.g. emerging risks related to innovation). This paradigm shift has impacts on the concept of safety which has to be revisited, but also other related concepts such as risk acceptability and their operational implementations (models, techniques, processes, practices, cultures, etc.).

2.4 THE INTEREST RATE RISK FACTOR

The risk of variations in future market values and the size of income, caused by fluctuations in the general level of interest rates is referred to as interest-rate risk. The basic cause of interest-rate risk lies in the fact that, as the rate of interest paid on Indian government securities rises or falls, the rates of return demanded on alternative investment vehicles, such as stocks and bonds issued in the private sector, rise or fall. In other words, as the cost of money

changes for risk-free securities, the cost of money to risk-prone issuers will also change. People normally regard government securities like treasury bills risk free. The interest rates demanded on these securities are thought to approximate the “pure” rate of interest, or the cost of hiring money at no risk. Interest rates on gilts shift with changes in the supply and demand for government securities. For example, a large operating deficit experienced by the Indian government will require financing. Issuance of added amounts of Indian government securities will increase the available supply. Potential buyers of this new supply may be induced to buy only if interest rates are somewhat higher than those currently prevailing on outstanding issues. If rates on gilts advance from, say, 8 percent to 8¼ percent, investors holding outstanding issues that yield 8 percent will notice a decline in the price of their securities. Because the 8 percent rate is fixed by contract on these “old” gilts, a potential buyer would be able to realize the competitive 8¼ percent rate only if the current holder “marked down” the price. As the rate on gilts advances, they become relatively more attractive and other securities become less attractive. Consequently, Also there are indirect effects on common stocks. First, lower or higher interest rates make the purchase of stocks on margin (using borrowed funds) more or less attractive. Higher interest rates, for example, may lead to lower stock prices because of a diminished demand for equities by speculators who use margin. Second, many firms, such as public utilities finance their operations quite heavily with borrowed funds. Others, such as financial institutions, are principally in the business of lending money. Advancing interest rates can bring higher earnings to lending institutions whose principal revenue source is interest received on loans. For these firms, higher earnings could lead to increased dividends and stock prices.

2.5 THE MARKET RISK FACTOR

The price of a stock may fluctuate widely within a short span of time even though earnings remain unchanged. The causes of this phenomenon are varied, but it is mainly due to a change in investor’s attitudes towards equities in general, or toward certain types or groups of securities in particular. Variability in return on most common stocks that is due to basic sweeping changes in investor expectations is referred to as market risk. The reaction of investors to tangible as well as intangible events causes market risk. Expectations of lower corporate profits in general may cause the larger body of common stocks to fall in price. Investors are expressing their judgment that too much is being paid for earnings in the light of anticipated events. The basis for the reaction is a set of real, tangible events political, social, or economic. Intangible events are related to market psychology. Market risk is usually touched off by a reaction to real events, but the emotional instability of investors acting collectively leads to a snowballing overreaction. The initial decline in the market can cause the fear of loss to grip investors, and a kind of herd instinct builds as all investors make for the exit. These reactions to reactions frequently culminate in excessive selling, pushing prices down far out of line with fundamental value. With a trigger mechanism such as the threat of war, or an oil shortage, virtually all stocks are adversely affected.

2.6 THE INFLATION RISK FACTOR

Inflation risk, also called purchasing power risk, is the chance that the cash flows from an investment won't be worth as much in the future because of changes in purchasing power due to inflation. Purchasing-power risk refers to the uncertainty of the purchasing power of the money to be received. In simple terms, purchasing-power risk is the impact of inflation or deflation on an investment. When we think of investment as the postponement of consumption, we can see that when a person purchases a stock, he has foregone the opportunity to buy some goods or service for as long as he owns the stock. If, during the holding period, prices on desired goods and services rise, the investor actually loses purchasing power. Rising prices on goods and services are normally associated with what is referred to as inflation. Falling prices on goods and services are termed deflation. Both inflation and deflation are covered in the all-encompassing term purchasing-power risk. Generally, purchasing-power risk has come to be identified with inflation (rising prices); the incidence of declining prices in most countries has been slight. The anticipated purchasing power changes manifest themselves on both bond and stocks.

2.7 THE DEFAULT RISK FACTOR

The borrower or issuer of securities may become insolvent or may default, or delay the payments due, such as interest installments or principal repayments. The borrower's credit rating might have fallen suddenly and he became default prone and in its extreme form it may lead to insolvency or bankruptcies. In such cases, the investor may get no return or negative returns. An investment in a healthy company's share might turn out to be a waste paper, if within a short span, by the deliberate mistakes of Management or acts of God, the company became sick and its share price tumbled below its face value.

2.8 THE MANAGEMENT RISK FACTOR

Management risk is the risk financial, ethical or otherwise associated with ineffective, destructive or underperforming management. Management risk can be a factor for investors holding stock in a company. Management risk can also refer to the risks associated with the management of an investment fund. Management risks arise due to errors or inefficiencies of management, causing losses to the company. Risk management is the process of identifying, quantifying, and managing the risks that an organization faces. As the outcomes of business activities are uncertain, they are said to have some element of risk. These risks include strategic failures, operational failures, financial failures, market disruptions, environmental disasters, and regulatory violations. Risk is a statistical concept that is measured using statistical concepts that are related to the unknown future. Almost all investments are exposed to it. Risk management involves identifying the types of risk exposure within the company, measuring those potential risks, proposing means to hedge insure or mitigate some of the risks and estimating the impact of various risks on the future earnings of the company.

While it is impossible that companies remove all risk from the organization, it is important that they properly understand and manage the risks that they are willing to accept in the context of the overall corporate strategy. The management of the company is primarily responsible for risk management, but the board of directors, internal auditor, external auditor, and general counsel also play critical roles. Risk can be managed in a number of ways: by the buying of insurance, by using derivative instruments as hedges, by sharing risks with others, or by avoiding risky positions altogether

2.9 THE LIQUIDITY RISK FACTOR

Liquidity risks involve loss of liquidity or loss of value in conversions from one asset to another say, from stocks to bonds, or vice versa. Such risks may arise due to some features of securities, such as salability; or lack of sinking fund or Debenture Redemption Reserve fund, for repayment of principal or due to conversion terms, attached to the security, which may go adverse to the investor. Liquidity risk is the potential that an entity will be unable to acquire the cash required to meet short or intermediate term obligations. In many cases, capital is locked up in assets that are difficult to convert to cash when it is required to pay current bills. The following are some examples of liquidity risk.

2.9.1 ACCOUNTS RECEIVABLE

IT consulting firm relies on reasonably timely customer payments in order to meet quarterly cash needs. A dispute with a large customer results in a sudden decline in cash flows and the firm misses a payroll payment. This results in compliance issues, fines and a severe decline in reputation and employee satisfaction.

2.9.2 BANK DEPOSITS

Generally speaking, banks don't have the cash that would be required if all customers were to withdraw their deposits all at once. If economic conditions cause a large number of withdrawals, banks may require a large amount of cash in a short period of time.

2.9.3 LINES OF CREDIT

In addition to deposits, unused space in lines of credit can quickly drain the liquidity of banks.

2.9.4 DEBT TERMS

A manufacturing company has a small reserve of cash and a large unused line of credit. The firm experiences a period of rapidly declining prices due to industry oversupply. They quickly run out of cash as their operating margins turn negative. The line of credit becomes unavailable due to their poor financial metrics. The firm starts to miss payments and suppliers stop supplying them with essential inputs. The business goes into a downward spiral and is quickly bankrupt.

2.9.5 MARKETABLE SECURITIES

An investor purchases a low volume small cap stock. The investor suddenly requires cash due to a personal emergency but has trouble selling the stock due to the low volume. The investor must set the price surprisingly low before their order finally fills. This results in a loss. If the investor had owned a high volume stock it could have been sold instantly at a market price with a low bid-ask spread.

2.9.6 ASSETS

An investor who has all of their net worth in real estate generates cash by selling properties on a regular basis at a profit and purchasing new ones. This works for the investor while the market is hot. When market conditions change, houses are difficult to sell and it takes over a year to complete a single sale. The investor is short on cash and must sell a few properties at exceptionally low prices to attract buyers in a down market.

2.10 SUMMARY

The different wellsprings of hazard in holding basic stocks must be evaluated so the investigator can look in danger in relationship to proportions of return. A sensible surrogate of risk is the fluctuation of return. This intermediary measure in insights is regularly the difference or standard deviation of the profits on a stock around the normal return. The wellsprings of methodical risk incorporate market, loan cost, and buying power dangers. Market risk reflects changes in financial specialist frames of mind toward values all in all that originate from unmistakable and impalpable occasions. Loan fee hazard and obtaining influence chance are related with changes in the cost of cash and different products and ventures. Increments in loan costs cause the costs of a wide range of securities to be discounted. Rising costs of products and enterprises (swelling or buying power changes) adverse effect security costs in light of the fact that the deferment of utilization through any type of speculation implies less 'genuine' purchasing power later on. The real wellsprings of unsystematic risk influencing the holding of basic stocks are business chance and budgetary hazard. Business hazard alludes to changes in the working condition of the firm and how the firm adjusts to them. Budgetary hazard is identified with the obligation and value blend of financing in the firm. Working benefits can be amplified up or down, contingent on the degree to which obligation financing is utilized and under what terms.

2.11 SELF-ASSESSMENT QUESTION

- Q.1.** Define investment risk and explain its evolutionary stages in brief.
- Q.2.** What is interest rate risk and how does it differ from purchasing power risk?
- Q.3.** What three risks are commonly classified as systematic in nature?

- Q.4.** Define risk and distinguish between systematic and unsystematic risk.
- Q.5.** Describe the default risk and liquidity risk.
- Q.6.** Describe in brief the purchasing power risk.
- Q.7.** Describe the management risk factor and inflation risk factor.
- Q.8.** Describe the liquidity risk factor with giving some examples.

2.12 REFERENCES

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UNIT-3 VALUATION OF SECURITIES

UNIT FRAMEWORK

- 3.1 Purpose
- 3.2 Introduction
- 3.3 The Three-Step Valuation Process
- 3.4 Economic Influence
- 3.5 Industry Influence
- 3.6 Empirical Support for the Valuation Sequence
- 3.7 The General Valuation Framework
- 3.8 The Basic Valuation Model
- 3.9 Value Price Relationship
- 3.10 The Cootner Hypothesis
- 3.11 Summary
- 3.12 Self-Assessment Question
- 3.13 References

3.1 PURPOSE

The objectives of this unit are:

- To discuss the Three-Step Valuation Process
- To discuss the general approach to valuation as influenced by the rules of market.
- and to explain the different classes of investors
- To analyze the valuation of fixed-income securities
- To explain the valuation of equity share

3.2 INTRODUCTION

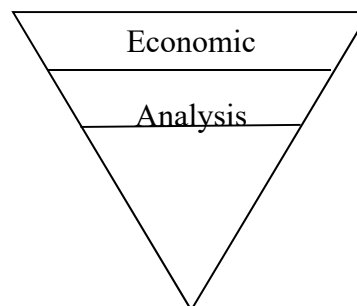
Investment is a responsibility of assets for a timeframe to determine a rate of return that would repay the speculators for the time amid which the assets are not accessible for utilization, for the normal rate of expansion amid the time of venture and for the vulnerability included. Since the target of the investment is to infer a rate of return, financial specialists need to initially indicate the ideal rate of return so a venture choice can be made whether the normal rate of return is equivalent to or more noteworthy than the ideal or required rate of return. In the

past unit, it was clarified that the required return increments alongside an expansion in the hazard dimension of venture. When the ideal or required rate of return is distinguished, the second step in speculation choice is to discover the normal return of venture. This is typically done by contrasting the underlying venture required with purchase the money related resource and occasional money streams accessible from the benefit. Now and again, similar to reserve funds ledger or interests in settled stores or corporate security, the estimation of expected return is genuinely simple in light of the fact that the guarantor of the security obviously expresses the money streams accessible from such resources. In this manner choice on such investment is moderately less demanding than putting resources into value shares. Interest in value shares expects financial specialists to appraise the sources of income dependent on the normal execution of the firm amid the speculation time frame.

3.3 THE THREE-STEP VALUATION PROCESS

In the earlier section, we explained that nature and scope of investment decision and component of investment risk. It depicts that investment decision is made by comparing the expected or estimated return with the required rate of return. A value of company's financial assets depends on two factors such as quality and the amount of profit it will give. While there are other factors as well which influence the price of the asset and the rate of return it will give. These factors include the environment of the economy and the annual performances of the company. In the simple way, we can say three-step valuation approach holds that both the economy/market and the industry effect have a significant impact on the total returns for individual securities. To illustrate this, we assume that an investor owns the stocks of a viable and successful firm. If the shares are owned during an economic expansion, the sales and the earnings of the firm will increase thus increasing the returns the investor receives from owning the firm's stocks. However, if the stocks are owned during an economic recession, the sales and the earnings of the firm will decline and consequently the stock price will decline as well. Therefore, in order to estimate the future value of a security and its rate of return it is absolutely essential to analyze the outlook for the aggregate economy and the industry that the firm operates in.

The three steps in the valuation process involve (1) the influence of the economic environment on the firms, (2) the importance of the industry environment on the firms and (3) the fundamentals of individual firms. Thus three-step approach is also called economy-industry-company (E-I-C) approach. This figure illustrates the E-I-C approach.



3.4 ECONOMIC INFLUENCE

The economic analysis is mainly driven by fiscal and monetary measures which influence the aggregate economy of a country and consequently all the industries and firms within the economy. Fiscal policy influences the direction of an economy through changes in government taxes or fiscal allowances. For example, imposing additional taxes on income, liquor, cigarettes, and gasoline can discourage consumer spending, while increases in government spending on unemployment insurance can offer financial relief. Fiscal policies influence the business environment particularly for firms that rely on such expenditures. At the same time, we should consider that government spending has a strong multiplier effect. For example, if road building is increased, then the demand for concrete materials will increase. Consequently, the profitability of construction firms will increase.

Monetary policy influences the direction of an economy through measures that control the supply of money, the cost of money and the interest rates of the economy. For example, a restrictive monetary that targets to reduce the growth rate of the money supply, it can reduce the supply of funds for working capital and expansion of the economy. Similarly, a restrictive monetary policy that targets the interest rates, it will increase firms' costs and will make money more expensive for consumers. Other factors that affect the economic analysis are inflation, political turmoil, international monetary devaluations and terrorist attacks.

3.5 INDUSTRY INFLUENCE

Industries are classified into cyclical and non-cyclical. Cyclical industries (steel, autos) perform better when the aggregate economy expands and suffer when the aggregate economy contracts. Non-cyclical industries (retail food) are stable during recession, but they do not experience a significant growth during expansion. Investors should examine if the firm belongs to a cyclical or non-cyclical industry in order to make the right investment decision in the right timing.

Another important consideration when analyzing the industry environment is the risk that international companies undertake when engaging in international markets. Firms that sell their products/services in international markets can benefit or suffer from shifts in the foreign economies. For example, the fast-food industry (McDonalds, Burger King) often experiences low demand in the domestic market and growing demand in the international market. Along these lines industry analysis ought to go before organization investigation. A feeble firm in a declining industry may demonstrate more remunerating than a pioneer in a powerless or declining industry. Obviously, the financial specialist would constantly be through a pursuit procedure with the goal that the best firms in solid ventures are recognized, and tight down the zone of look for investment outlets. Industry analysis is likewise helpful for speculators to distribute assets for various ventures considering the future potential and current valuation.

3.6 EMPIRICAL SUPPORT FOR THE VALUATION SEQUENCE

You may at this stage, make an inquiry: "For what reason ought to the 'company level' be the last stage in the valuation succession?" The valuation arrangement can be guarded and your inquiry suitably replied on the off chance that it could be demonstrated that profit, rates of return, costs, and risk dimensions of an organization bear associations with the economy or with the market which is utilized as a substitute factor for the 'general economy'. Numerous examinations are accessible regarding the matter and it may not be strange to give an outline of their fundamental discoveries.

King (1960) this study examined the firm, industry, and economy relationships using the rate of return as the base variable. The rate of return was defined as the monthly percentage change in price. The exercise covered 63 stocks representing six industries for 403 months from June 1927 through December 1960. Fifty-two per cent of the variation in stock prices was explained by variations in the prices of the whole market and another ten per cent by industry variability. Even though the influence of the market factor did decline over time, King's study confirms the valuation sequence being discussed in this section. (Benjamin F. King, "Market and Industry Factors in Stock Price Behaviour," *Journal of Business*, Vol. 39 No.1, Part-2, January 1960, pp 139-190).

Brown and Ball (1967) this study selected 316 firms belonging to different industries. Earnings of each firm were first related to earnings of all 316 firms (dummy for "economy") and then to earnings of each of the firm belonging to its respective industry for the 1947-1965 period. It was found that 30-40 per cent of variability of each firm's earnings was related to the variability of earnings of all firms, plus, 10-15 per cent of the firm's earnings variability was related to the earnings variability of the industry. Also, larger and more diversified firms were more closely related to the economy while the small and specialized firms showed greater independence. ("Some preliminary findings on the Association between the Earnings of a Firm, Its Industry and the Economy," *Empirical Research in Accounting; Selected Studies*, 1967, Supplement to Vol. 5, *Journal of Accounting Research*, pp 55-57).

Blume (1971) this study examined the influence of the market studying all the New York Stock Exchange (NYSE) stocks for the period July 1926 through June 1968. Systematic risk factor was computed with beta as the measure. The influence of the market was found to decline but still it explained about 30 per cent of the variance in individual shares. (Marshall E. Blume, "On the Assessment of Risks," *Journal of Finance* Vol 26, No. 1, March, 1971 pp 1-10).

The consequences of these investigations recommend firmly that an educated speculator should initially extend the condition of the economy in perspective on its cozy association with the securities exchange. What's more, when a development is foreseen, genuine regular stock investigation would be basic.

Myers (1973) using King's methodology, this study enlarged the sample by adding 5 stocks from each of the twelve industry groups and extended the sample

period to December 1967. The market explained more than 55 per cent of the variance for individual prices prior to 1944 but its explanatory power declined to less than 35 per cent during the 1952-1967 period. The industry influence also weakened after 1952. The industry influence was very weak when the industry was heterogeneous. Overall, the market and industry need to be analyzed before looking at individual stocks. (Stephen L. Myers, "A Re-Examination of Market and Industry Factors in Stock Price Behaviour," Journal of Finance, Vol 28, No. 3, June 1973, pp 695-705).

3.7 THE GENERAL VALUATION FRAMEWORK

Most financial specialists take a gander at value developments in securities markets. They see chances of capital gains in such developments. All would wish on the off chance that they could effectively foresee them and guarantee their increases. Maybe a couple, nonetheless, perceive that esteem decides cost and the two changes haphazardly. It would be valuable for an insightful investor to know about this procedure. The present area looks at this procedure in detail. We first present a concise framework of the essential valuation model and after that continue to talk about the relationship of significant worth with cost by means of financial specialist advertise activity. We will likewise review dynamic and inactive investment procedures lastly make sense of the dynamic valuation show.

3.8 THE BASIC VALUATION MODEL

Valuation is the process that establishes the link between the risk and return to find the value or worth of an asset. The inputs required for basic valuation are:

- a. The expected returns in terms of cash flows with their respective timings of occurrence.
- b. Risk in terms of the required return

The expected returns can either be annual or intermittent or sometimes even for once. The basic value of an asset or a security is the sum of discounted value of all the future expected cash flows. The discount rate is the rate used as the required rate of return which is dependent upon the level of risk. If the investment in the asset is very risky, higher would be the discount rate. If the investment in the asset is less risky, lower would be the discount rate.

Suppose if these are given such as risk-adjusted discount rate and the future expected earnings flow of a security in the form of interest, dividend earnings, or cash flow, you can determine the present value by following:

$$P.V. = \frac{CF1}{(1+r)} + \frac{CF2}{(1+r)^2} + \frac{CF3}{(1+r)^3} + \frac{CFn}{(1+r)^n}$$

Whereas PV = Present Value

CF= Cash Flow up to n period

R = risk-adjusted discount rate (i.e. interest rate)

Communicated in the above way, the model looks straightforward. Be that as it may, reasonable challenges do make the utilization of the model confused. For example, it might be very hard to expect that each financial specialist in the market precisely measure the estimation of money streams and hazard balanced required rate of return. Further, financial specialists' desire on remuneration for hazard may likewise unique between various sorts of speculators. A little change in these measures will likewise cause an adjustment in the esteem. Subsequently, it may not be conceivable to produce a solitary esteem. You will understand that advertise activities would end up repetitive with a scope of qualities. Also, return, risk, and esteem would in general change after some time. Therefore, security costs may rise or fall with purchasing and moving weights separately (accepting supply of securities does not change) and this may influence capital additions and consequently returns anticipated. Thus, evaluations of future salary should be reconsidered and values revised. Thus, the hazard composition of the security may change after some time. The firm may over get (and face budgetary hazard) or take part in a dangerous endeavor (and face working danger). An expansion in hazard would raise the markdown rate and lower esteem. It would then appear to be a consistent exercise. Each new data will influence esteems and the purchasing and moving weights, which keep costs in ceaseless movement, would drive them constantly near new qualities. The last piece of this segment depicts this dynamic valuation demonstrate with regularly changing data inputs.

3.9 VALUE PRICE RELATIONSHIP

Value price relationship is the connection that consumers make between price and quality; products with a higher price are commonly perceived to be of better quality. Value-based price (also value optimized pricing) is a pricing strategy which sets prices primarily, but not exclusively, according to the perceived or estimated value of a product or service to the customer rather than according to the cost of the product or historical prices. Where it is successfully used, it will improve profitability through generating higher prices without impacting greatly on sales volumes.

Value-based pricing in its literal sense implies basing pricing on the product benefits perceived by the customer instead of on the exact cost of developing the product. For example, a painting may be priced as much more than the price of canvas and paints: the price in fact depends a lot on who the painter is. Painting prices also reflect factors such as age, cultural significance, and, most importantly, how much benefit the buyer is deriving. Owning an original Dali or Picasso painting elevates the self-esteem of the buyer and hence elevates the perceived benefits of ownership.

The buying and selling pressures dominantly originate with active investors and it followed certain rules which are as follow

Rule 1: When value is more than price then should be buy. This shows that when shares are underpriced and it would be a bargain to buy now and sell when prices move up toward value.

Rule 2: When value is less than price then should be sale. This shows that when shares would be overpriced and it would be profitable to sell them now and avoid less when price later moves down to the level of the value.

Rule 3: When value is equal to price then do not trade. This shows when the market price is in equilibrium and is not expected to change.

3.10 THE COOTNER HYPOTHESIS

The Cootner hypothesis is a contrasting hypothesis put forward as a response to another hypothesis. Cootner adds one more measurement to the general perspective on financial specialist activity and purchase move weights. He arranges dynamic financial specialists further into two gatherings viz., 'proficient speculators' and 'unsophisticated speculators'. The previous are sufficiently creative to find news and create appraisals of characteristic esteem even before the unsophisticated financial specialists get the news. They will, in this manner, be the first to initiate advertised activity the minute an esteem value confound is found. 'Unsophisticated financial specialists' include hurried examiners who follow up on 'hot tips' would not get any news other than open news and won't have the aptitude to decipher even such open news. They will be that as it may, act in the market however such an activity would be inconsistent with genuine changes in inborn esteem. For example, some of them may have retirement benefits and would frantically need to put resources into offers and securities. Furthermore, lamentably, such an activity may come up when cost is more than esteem. Moreover, some such speculators may need to fund a marriage in the family and would need to move shares held by them regardless of whether cost is as of now governing at a dimension lower than the natural esteem. Clearly the activity of unsophisticated financial specialists would cut against the exchanging weights expected to redress the disequilibrium among esteem and cost. It is just when their silly move makes costs to generous 'highs' or 'lows' that the expert financial specialists reappear the scene and pocket gigantic benefits even while endeavoring to realign the errant costs to natural qualities. Paul Samuelson has enhanced the Cootner plan of the valuation show by focusing on the condition of consistent balance. Such a circumstance would be framed when costs alter at rapid to values. Immediately modifying costs to 'vibrating qualities' future known as flawlessly proficient costs, which would be expected to mirror all data. A security with splendidly effective costs would be in nonstop balance.

3.11 SUMMARY

The essential target of this unit is that the estimation of a benefit is a component of future expected money streams from the advantage. The general valuation display is limiting the future money streams at the required rate of return. This model applies to all advantages including budgetary resources. The model can be moderately less demanding to apply on fixed pay securities in light of the fact that there is some measure of conviction on the future money streams. Given a future intrigue and foremost reimbursement, it is a lot less demanding to get the estimation of bond. Since the market cost is as of now accessible, valuation practice is regularly diminished to passing judgment on whether the

benefit is appropriately esteemed or not. In fixed salary securities or securities, the general valuation show is additionally used to figure the respect development (YTM) to contrast the equivalent and the present yield of-comparative securities to make a decision under or over valuation of securities. The natural estimation of an offer anytime of time is the present estimation of a progression of money profits in future timeframes with presumptions about fluctuating development levels and circumstances being acquainted with make figuring's usable by and by. Profit valuation models with zero development, steady development, and super-typical development suppositions are discovered helpful for the rehearsing security examiners and the speculators. The markdown rate in every one of these models is the required rate of return of the speculator fittingly balanced for the time estimation of cash and danger of profits. A much rearranged and reasonable valuation display is value profit show.

Paul Samuelson has enhanced the Cootner plan of the valuation show by focusing on the condition of consistent balance. Such a circumstance would be framed when costs alter at rapid to values. Immediately modifying costs to 'vibrating qualities' future known as flawlessly proficient costs, which would be expected to mirror all data. A security with splendidly effective costs would be in nonstop balance.

3.12 SELF-ASSESSMENT QUESTION

1. What do you understand by the three-step valuation process? Explain it.
2. Discuss the economic influence of valuation process.
3. Elaborate industry influence of valuation process.
4. What are the empirical supports for the valuation sequence? Discuss it.
5. What are the general valuation frameworks? Explain it.
6. Discuss the basic valuation models with suitable examples.
7. What is the value price relationship? Explain it.
8. Discuss the cootner hypothesis. What are the effects of important factors?

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UNIT-4 THE DYNAMIC VALUATION PROCESS

UNIT FRAMEWORK

- 4.1 Purpose
- 4.2 Introduction
- 4.3 The Dynamic Valuation Process
- 4.4 Valuation of Fixed Income Securities
- 4.5 Estimating Returns on Fixed Income
- 4.6 Securities Valuation of Preference Shares
- 4.7 Valuation of Equity Shares
- 4.8 The Present Value of Expected Stream of Benefits from Equity Shares
- 4.9 Dividend Valuation Model
- 4.10 The P/E Approach to Equity Valuation
- 4.11 Summary
- 4.12 Self-Assessment Question
- 4.13 References

4.1 PURPOSE

After studying this unit, you should be able:

- To explain the dynamic valuation process and valuation of fixed income securities;
- To list the estimating returns on fixed income and the securities valuation of preference shares,
- To identify the valuation of equity shares,
- To describe the present value of expected stream of benefits from equity shares,
- To explain dividend valuation model and the P/E approach to equity valuation.

4.2 INTRODUCTION

Shares valuation is done according to numerous principles in different markets, but a basic standard is that a share is worth price at which a transaction would be expected to occur to sell the shares. The liquidity of markets is a major consideration as to whether a share is able to be sold at any given time. An actual sale transaction of shares between buyer and seller is usually considered to provide the best prima facie market indicator as to the "true value" of shares at that specific time. In the present day financial markets, investment has become complicated. One makes investments for a return higher than what he can get by keeping the money in a commercial or cooperative bank or even in an investment bank. In the finance field, it is a common knowledge that money or finance is scarce and that investors try to maximize their return. But the finance theory states that the return is higher, if the risk is also higher. Return and risk go together and they have a tradeoff. Most of the investments are risky to some degree. The art of investment is to see that the return is maximized with the minimum of risk, which is inherent in investments. If the investor keeps his money in a bank in savings account, he takes the least risk, as the money is safe and he will get back when he wants it. But he runs the risk that the return in real terms, adjusted for inflation is negative or small and even if positive, it may not come up to his expectations or needs. Valuing fixed income securities takes some advanced mathematics and understanding of finance. First of all we discount the cash flows and take the PV of the Principal portion of the actual Bond. Duration and convexity is also brought into the equation using calculus to determine the maturity of cash flows and the rate of change in pricing based on interest rate movements.

4.3 THE DYNAMIC VALUATION PROCESS

Valuation is the process of determining the fair value of a financial asset. The process is also referred to as "valuing" or "pricing" a financial asset. Current dynamic models that relate macroeconomics and asset pricing are constructed from an amalgam of assumptions about preferences (such as risk aversion or habit persistence, etc.), technology (productivity of capital or adjustment costs to investment), markets, and exposure to unforeseen shocks.

Some of these components have more transitory effects while others have a lasting impact. In part my aim is to illuminate the roles of these model ingredients by presenting a structure that uses features long-term implications for value as a benchmark. By value I mean either market or shadow prices of physical, financial or even hypothetical assets.

These methods provide a sharp contrast to more typically short-term characterizations of risk-return tradeoffs. You ought to have at this point comprehended the dynamic idea of valuation. Appraisals of present esteem, hazard and rebate rates, future pay, and purchase offer activity must be looked into occasionally in light of new bits and sets of data. The speculators begin with their evaluations of inherent esteem utilizing the present esteem methodology. Taking a shot at the exchanging rules, they purchase move or don't exchange. All the while, purchasing and moving weights are produced and costs either climb or

down. In either case, Future return will be affected by the most recent market value responding to purchasing/moving weights.

4.4 VALUATION OF FIXED INCOME SECURITIES

Globally, the fixed-income market is a key source of financing for businesses and governments. In fact, the total market value outstanding of corporate and government bonds is significantly larger than that of equity securities. Similarly, the fixed-income market, which is also called the debt market or bond market, represents a significant investing opportunity for institutions as well as individuals. Fixed income financial instruments which, traditionally, have been identified as a long-term source of funds for a corporate enterprise are the cherished conduit for investor's money. A fixed-income security is, essentially, a financial asset that gives the holder a given (i.e. fixed) stream of cash flows.

4.5 ESTIMATING RETURNS ON FIXED INCOME

A fixed income security is an investment that provides a return in the form of fixed periodic payments and the eventual return of principal at maturity. Unlike a variable-income security, where payments change based on some underlying measure such as short-term interest rates, the payments of a fixed-income security are known in advance. Fixed-income securities generate regular income, reduce overall risk, and protect against volatility of a portfolio. The securities can appreciate in value and offer more stability of principal than other investments. Corporate bonds are more likely than other corporate investments to be repaid if a company declares bankruptcy.

4.6 SECURITIES VALUATION OF PREFERENCE SHARES

Preference share means the share which has priority of repayment of capital as well as for dividends. Preference shares are securities which can be thought of as being mid-way between debt and equity. Preference shareholders do not get a variable return. Rather they get a fixed rate of return like debt holders. Thus it does not face the risks of an equity shareholder and also does not get the slow return of a bond holder.

The valuation of preference shares is a very straightforward exercise. Usually preference shares pay a constant dividend. This dividend is the percentage of the face value of the share. For instance, a preference share with the face value of Rs.100 which pays 5% dividend will pay Rs. 5 in dividends.

Hence, if the required rate of return of an investor is 10%, then the value of the preference share can be arrived at using the simple formula

$$\text{Value (Preference Share)} = \frac{D}{r}$$

Where,

D is the constant amount of dividends being received

And r is the required rate of return for the investor

Hence, the value of this preference share would be $\frac{5}{0.1} = \text{Rs}50$

Value of a Redeemable Preference Share

$$V_p = d/(1 + kp)^1 + d/(1 + kp)^2 + \dots \dots \dots d/(1 + kp)^n + P_n/(1 + kp)^n$$

Where, V_p = Value of preference share

d = Annual dividend per preference share

P_n = Maturity or redemption price of preference share

K_p = Required rate of discount on preference share.

Illustration

Mr. x is considering the purchase of a 7% preference share of Rs. 1,000 redeemable after 5 years at par. What should be willing to pay now to purchase the share assuming that the required rate of return is 8%?

Solution

$$\begin{aligned} V_p &= d/(1 + kp)^1 + d/(1 + kp)^2 + \dots \dots \dots d/(1 + kp)^n + P_n/(1 + kp)^n \\ &= \frac{70}{1.08} + \frac{70}{(1.08)^2} + \frac{70}{(1.08)^3} + \frac{70}{(1.08)^4} + \frac{70}{(1.08)^5} + \frac{1000}{(1.08)^5} \\ &= 960.51 \end{aligned}$$

Value of a Perpetual Preference Share

If the preference share has no maturity date or is irredeemable and the future dividends are expected to be constant, the value can be calculated as below:

$$V_p = \frac{D}{k_p}$$

Where, V_p = Value of preference share

d = Constant annual dividend

k_p = Required rate of discount or return on preference share.

Illustration

Mr. x has a irredeemable preference share of Rs. 1,000. He receives an annual dividend of Rs. 80 annually. What will be its value if the required rate of return is 10%?

Solution

$$V_p = \frac{D}{k_p} = \frac{80}{0.10} = \text{Rs. 800}$$

4.7 VALUATION OF EQUITY SHARES

The valuation of equity shares is relatively difficult as compared to the bonds or preferred stock. The cash flows of the latter are certain because the rate of interest on bonds and the rate of dividend on preference shares are known. The cash flows expected by investors on common stock are uncertain. Equity value commonly referred to as the market value of equity or market capitalization, can be defined as the total value of the company that is attributable to equity investors. It is calculated by multiplying a company's share price by its number of shares outstanding.

However, we can determine the value of equity shares:

- (a) By developing certain models based on capitalization of dividend, and
- (b) Capitalization of earnings. Dividend capitalization models are the basic valuation models.

Other methods used for equity valuation

- i. **Book Value:** It is the net worth of a company divided by number of outstanding shares. Net worth is equal to paid-up equity capital plus reserves and surplus minus losses.
- ii. **Liquidation Value:** Liquidation value is different than a book valuation. In that it uses the value of the assets at liquidation, which is often less than market and sometimes book. Liabilities are deducted from the liquidation value of the assets to determine the liquidation value of the business. Liquidation value can be used to determine the bare bottom benchmark value of a business.

$$\text{Liquidation Value} = \frac{\text{Valueresalisedper sharefromliquidationall the assetsof the firmamount to bepaid to all the creditorsand preference shareholders}}{\text{No. of outstanding shares}}$$

- iii. **Replacement Cost:** Replacement costs provide an alternative way of valuing a company's assets. The replacement, or current, cost of an asset is the amount of money required to replace the asset by purchasing a similar asset with identical future service capabilities. In replacement cost, assets and liabilities are valued at their cost to replace.

4.8 THE PRESENT VALUE OF EXPECTED STREAM OF BENEFITS FROM EQUITY SHARES

Key examination is fixated on introduced esteem, which is registered as the limited estimation of future stream of advantages. On account of value shares, the future stream of income presents two issues. One, it is neither indicated (as on account of inclination shares) nor flawlessly referred to progress of time as a commitment (as on account of bonds and debentures). Therefore, future advantages and their planning have both to be evaluated in a probabilistic system.

Two, there are no less than three different factors which are utilized as elective proportions of such advantages viz., profits, money streams, and income. Answer for the principal issue is offered by past information, which is properly altered for future projections. Obviously, speculators need to adjust the past information by considering the present reality and after that measure the development rate.

The second issue can likewise be seen as an instance of the three options not by any means clashing with one another. The genuine inquiry is: which money streams are suitable in the valuation of value shares? Presently, on the off chance that you purchase value offers and spot them all in a trust support for your and your beneficiary's never-ending advantage, what money streams will be gotten in the trust subsidize? The appropriate response is 'profits' since this is the main money dispersion, which an organization makes to its investors. Despite the fact that profit per share in any year do have a place with the investors, organizations don't circulate them all. Does it mean we ought to overlook income in valuation? Presumably No. All profits are paid out of income. Besides, a mainstream way to deal with valuation of value shares known as P/E proportion utilizes profit as its premise. Consequently, incomes are critical. Presently, if all income is paid out as profits, they will be represented as profits. In case of a piece of profit being held and reinvested, the impact will be to expand future income lastly future profits moreover. Present esteem examination ought not to check profit reinvested right now and paid later as profits. It will prompt twofold checking. Indeed, the two can be appropriately characterized and isolated in which case the two factors viz., income and profits would create similar outcomes. Accordingly, it is constantly right to utilize profits as the numerator of the present esteem condition used to appraise the natural estimation of value shares. The present esteem display, which utilizes profits as its variable speaking to the income stream, is known as the profit valuation demonstrates. This model is talked about beneath and is trailed by a discourse of the P/E way to deal with value shares valuation.

4.9 DIVIDEND VALUATION MODEL

There are two ways by which valuation of shares may be made:

On the basis of total amount of dividend, or On the basis of percentage or rate of dividend:

4.9.1 ON THE BASIS OF TOTAL AMOUNT OF DIVIDEND

$$\text{Capitalized Value of Profit} = \frac{\text{Divisible Profit}}{\text{Normal Rate of Return}} \times 100$$

$$\text{Value of each Equity Share} = \frac{\text{Capitalised Value of Profit}}{\text{Number of Equity Shares}}$$

4.9.2 ON THE BASIS OF PERCENTAGE OR RATE OF DIVIDEND

Value of each equity share:

$$= \frac{\text{Rate of Dividend}}{\text{Normal Rate of Return}} \times \text{Paid-up Value of each Equity Share}$$

When the rate of dividend is not given, then

$$\text{Rate of Dividend} = \frac{\text{Profit}}{\text{Equity Share Capital (Paid-up)}} \times 100$$

Whether Profit Basis or Dividend Basis method is followed for ascertaining the value of shares depends on the shares that are held by the respective shareholders. In other words, the shareholders holding minimum number of shares (i.e., minority holding) may determine the value of his shares on dividend basis since he has to satisfy himself having the rate of dividend which is recommended by the Board of Directors, i.e., he has no such power to control the affairs of the company. On the contrary, the shareholders holding maximum number of shares (i.e., majority holding) has got more controlling rights over the affairs of the company including the recommendation for the rate of dividend among others. Under the circumstances, valuation of shares should be made on profit basis. In short, Profit Basis should be followed in the case of majority holding, and dividend basis should be followed in the case of minority holding.

4.10 THE P/E APPROACH TO EQUITY VALUATION

The price-to-earnings ratio (P/E ratio) is the ratio for valuing a company that measures its current share price relative to its per-share earnings (EPS). P/E ratios are used by investors and analysts to determine the relative value of a company's shares in an apples-to-apples comparison. It can also be used to compare a company against its own historical record or to compare aggregate markets against one another or over time.

The Price Earnings Ratio (P/E Ratio) is the relationship between a company's stock price and earnings per share (EPS). It is a popular ratio that gives investors a better sense of the value of the company. The P/E ratio shows the expectations of the market and is the price you must pay per unit of current earnings (or future earnings, as the case may be).

Earnings are important when valuing a company's stock because investors want to know how profitable a company is and how profitable it will be in the future. Furthermore, if the company doesn't grow and the current level of earnings remains constant, the P/E can be interpreted as the number of years it will take for the company to pay back the amount paid for each share.

The Price - Earnings Ratio Formula:

The PE ratio is the market price per share divided by the earnings per share. The market price per share is simply the stock price. If you want the trailing PE, the earnings per share can be found on the most recent income statement. If you want the forward PE, you use estimated future earnings per share.

$$\text{Price-Earnings Ratio} = \frac{\text{Market price per Share}}{\text{Earning per Share}}$$

The price-to-earnings ratio, commonly known as the P/E ratio, is one of the most widely used valuation metrics. It is a basic measure used to compare different

investments or the same investment over different periods of time, and it's simple to calculate.

The P/E ratio is most commonly used for a quick comparison between two securities to see how Wall Street values them, with a higher P/E suggesting that future earnings are more likely. Dividing the common stock market share price (numerator) by earnings per share (denominator) produces the ratio. For example, a stock with a market price of Rs20.00 and earnings of Rs1.00 per share would have a P/E ratio of 20 ($20/1=20$).

P/E ratios can be calculated on past or realized earnings, projected earnings, or a combination of each. Earnings are sometimes adjusted to exclude extraordinary events, since they are unlikely to repeat. When considering P/E ratios, it is important to understand if and how earnings have been adjusted and whether they are actual or projections.

4.11 SUMMARY

Fixed income analysis is the analytical framework used to evaluate and assess fixed income securities for investment purposes. This includes credit and risk analysis, as well as bond valuation. It applies to securities such as government and corporate bonds, and plays an important role in the trading and pricing of such instruments in the market. Emphasis is placed on the need for regular adjustments to long-term investors' portfolios. As portfolios get older, those investors see a reduction in the returns' dispersion, while differences in risk between various portfolios increase. This means that to maintain a fixed risk–return ratio for a portfolio as the horizon increases; an investor needs to increase the share of lower-risk financial assets during asset allocation process. This thesis becomes especially relevant in the context of retirement savings management.

The dividend discount model is a useful heuristic model that relates the present stock price to the present value of its future cash flows in the same way that a bond is priced in terms of its future cash flows. However, bond pricing is more exact, especially if the bond is held to maturity, since its cash flows and the interest rate of those cash flows are known with certainty, unless the bond issuer defaults. The dividend discount model, however, depends on projections about company growth rate and future capitalization rates of the remaining cash flows. For instance, in a bear market, the capitalization rate will be higher than in a bull market investors will demand a higher required rate of return to compensate them for a perceived greater amount of risk.

Share valuation is carried out by financial experts/analysts in the stock market. The value they compute is usually called Theoretical/Intrinsic/real value. Theoretical value is different from market value/price of a share as quoted on the stock exchange. The comparison of the two values (market and theoretical) form the basis of stating whether a share is undervalued or overvalued.

The markdown rate in every one of these models is the required rate of return of the speculator fittingly balanced for the time estimation of cash and danger of profits. A much rearranged and reasonable valuation display is value profit show. Under this model, the stock cost is the result of anticipated profit and typical P/E

proportion of the stock. The typical P/E proportion is either the normal of the business or P/E proportion of comparable organization in the market. Obviously, the examiners can't utilize the P/E show and so far as that is concerned even hypothetically more extravagant profit markdown demonstrate indiscriminately on the grounds that there are a few different variables which decide the estimation of the stock.

4.12 SELF-ASSESSMENT QUESTION

1. What do you understand by the dynamic valuation process? Explain it.
2. Discuss the valuation of fixed income securities and give suitable examples to satisfy your views.
3. Describe the estimating returns on fixed income.
4. What is the securities valuation of preference shares? Discuss it.
5. Explain the valuation of equity shares. Describe the present value of expected stream of benefits from equity shares.
6. What is the dividend valuation model? Explain it.
7. Discuss the P/E approach to equity valuation.
8. Mr. x is considering investment in the equity shares of the industry leader, TATA, and has performed detailed analysis and research into the history and performance of the company. To be on sound wickets, what other information should be obtained before taking the final decision?
9. A 5% Rs.100 bond has 25 years remaining to maturity. What would be the intrinsic value of the bond today if the current market yield is 6.5%. Interest is payable on the bond semi-annually.
10. A 5% Rs. 100 bond paying interest at annual intervals and having 25 years to maturity is currently selling for Rs. 816. It is anticipated that the market yield is likely to decline 5.5%. Estimate the intrinsic value of the bond two years hence.

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॥ सरस्वती नः सुभगा मयस्करत् ॥

Uttar Pradesh Rajarshi Tandon
Open University

M.Com-403

Security Analysis and Portfolio Management

BLOCK

2

UNIT-5

Organisation and Functioning

UNIT-6

Regulation of Orcei

UNIT-7

Securities and Exchange Board of India

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BLOCK INTRODUCTION

In **Block 2** you have learnt about the security analysis and portfolio management; organization and functioning, regulation and securities and exchange board India (SEBI).

Unit 5 discusses about organization and functioning; primary vs. secondary markets, types of traded securities, stock market in India, origin and growth, role and functions, membership organization & management, trading system, stock market information system, principal weakness, directions of reform, and over the counter exchange of India (OTCEI).

Unit 6 explains regulation; history of securities market regulation, regulation of secondary market, and regulation of primary market regulation of OTCEI.

Unit 7 deals with securities and exchange board India (SEBI) origin; functions, organization activities, and self-regulation.

UNIT-5 ORGANISATION FUNCTIONING

AND

UNIT FRAMEWORK

- 5.1 Purpose
- 5.2 Introduction: Organization and Functioning
 - 5.2.1 Functions of the Stock Exchange
- 5.3 Primary Vs. Secondary Markets
- 5.4 Types of Traded Securities IN Capital Market
- 5.5 Stock Market in India
 - 5.5.1 Origin and Growth
 - 5.5.2 Role and Functions
 - 5.5.3 Membership Organization & Management
 - 5.5.4 Trading System
 - 5.5.5 Stock Market Information System
 - 5.5.6 Principal Weakness
 - 5.5.7 Directions of Reform
- 5.6 Over the Counter Exchange of India (OTCEI)
- 5.7 Summary
- 5.8 Self-Assessment Question
- 5.9 References

5.1 PURPOSE

The objectives of this unit are:

- To distinguish between primary market and secondary market
- To discuss various types of traded securities and stock market in India
- To explain the origin and growth, role and functions;
- To list the membership organization & management,
- To identify the trading system and stock market information system,

- To describe the principal weakness and directions of reform,
- To discuss over the counter exchange of India (OTCEI)

5.2 INTRODUCTION: ORGANIZATION AND FUNCTIONING

Securities are financial instruments issued to raise funds. The primary function of the securities markets is to enable to flow of capital from those that have it to those that need it. Securities market help in transfer of resources from those with idle resources to others who have a productive need for them. Securities markets provide channels for allocation of savings to investments and thereby decouple these two activities. As a result, the savers and investors are not constrained by their individual abilities, but by the economy's abilities to invest and save respectively, which inevitably enhances savings and investment in the economy.

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, viz., the primary market and secondary market. The primary market, also called the new issue market, is where issuers raise capital by issuing securities to investors. The secondary market also called the stock exchange facilitates trade in already-issued securities, thereby enabling investors to exit from an investment. The risk in a security investment is transferred from one investor (seller) to another (buyer) in the secondary markets. The primary market creates financial assets, and the secondary market makes them marketable.

The secondary tier of the capital market is what we call the stock market or the stock exchange. The stock exchange is a virtual market where buyers and sellers trade in existing securities. It is a market hosted by an institute or any such government body where shares, stocks, debentures, bonds, futures, options, etc. are traded. A stock exchange is a meeting place for buyers and sellers. These can be brokers, agents, individuals. The price of the commodity is decided by the rules of demand and supply. In India, the most prominent stock exchange is the Bombay Stock Exchange. There are a total of twenty-one stock exchanges in India.

5.2.1 FUNCTIONS OF THE STOCK EXCHANGE

1. **Liquidity and Marketability:** One of the main drawing factors of the stock exchange is that it enables high liquidity. The securities can be sold at a moment's notice and be converted to cash. It is a continuous market and the investors can divest and reinvest with ease as per their wishes.
2. **Price Determination:** In a secondary market, the only way to determine the price of securities is via the rules of supply and demand. A stock exchange enables this process via constant valuation of all the securities.

Such prices of shares of various companies can be tracked via the index we call the Sensex.

3. **Safety:** The government strictly governs and regulates the stock exchanges. In the case of the BSE, the Securities Board of India is the governing body. All transactions occur within the legal framework. This provides the investor with assurances and a safe place to transact in securities.
4. **Contribution to the Economy:** As we know the stock exchange deals in already-issued securities. But these securities are continuously sold and resold and so on. This allows the funds to be mobilized and channelized instead of sitting idle. This boosts the economy.
5. **Spreading of Equity:** The stock exchange ensures wider ownership of securities. It actually educates the public about the safety and the benefits of investing in the stock market. It ensures a better quality of transactions and smooth functioning. The idea is to get more public investors and spread the ownership of securities for the benefit of everyone.
6. **Speculation:** One often hears that the stock exchange is a speculative market. And while this is true, the speculation is kept within the legal framework. For the sake of liquidity and price determination, a healthy dose of speculative trading is necessary, and the stock exchange provides us with such a platform.

5.3 PRIMARY VS. SECONDARY MARKETS

Primary Market is also known as a New Issue Market. The primary market is where companies issue a new security, not previously traded on any exchange. A company offers securities to the general public to raise funds to finance its long-term goals. In the primary market, securities are directly issued by companies to investors. Securities are issued either by an Initial Public Offer (IPO) or a Further Public Offer (FPO).

The secondary market is where existing securities i.e. shares, debentures, bonds, etc. are traded among investors. Securities that are offered first in the primary market are thereafter traded on the secondary market. The trade is carried out between a buyer and a seller, with the stock exchange facilitating the transaction. In this process, the issuing company is not involved in the sale of their securities

BASIS FOR COMPARISON	PRIMARY MARKET	SECONDARY MARKET
Meaning	The market place for new shares is called primary market.	The place where formerly issued securities are traded is known as Secondary Market.

Method of Purchasing	Direct	Indirect
Financing	It supplies funds to enterprises and also to diversification.	It does not provide funding to companies.
Times of selling	Only once	Multiple times
Trading between	Company and Investors	Investors
Who are bearer of profit/loss	Company/shareholders	Investors
Intermediaries	Underwriters	Brokers
Price	Fixed Price	Fluctuates, depends on the demand and supply force
Organizational difference	Not rooted to any specific spot or geographical location.	It has physical existence

5.4 TYPES OF TRADED SECURITIES IN CAPITAL MARKET

The capital market, as it is known, is that segment of the financial market that deals with the effective channeling of medium to long-term funds from the surplus to the deficit unit. The process of transfer of funds is done through instruments, which are documents (or certificates), showing evidence of investments. The instruments traded (media of exchange) in the capital market are:

1. **Debt Instruments:** A debt instrument is used by either companies or governments to generate funds for capital-intensive projects. It can be obtained either through the primary or secondary market. The relationship in this form of instrument ownership is that of a borrower creditor and thus, does not necessarily imply ownership in the business of the borrower. The contract is for a specific duration and interest is paid at specified periods as stated in the trust deed* (contract agreement). The principal sum invested, is therefore repaid at the expiration of the contract period with interest either paid quarterly, semi-annually or annually. The interest stated in the trust deed may be either fixed or flexible. The tenure of this category ranges from 3 to 25 years. Investment in this instrument is, most times, risk-free and therefore yields lower returns when compared

to other instruments traded in the capital market. Investors in this category get top priority in the event of liquidation of a company.

When the instrument is issued by:

- The Federal Government, it is called a Sovereign Bond;
- A state government it is called a State Bond;
- A local government, it is called a Municipal Bond; and
- A corporate body (Company), it is called a Debenture, Industrial Loan or Corporate Bond

2. **Equities (also called Common Stock):** This instrument is issued by companies only and can also be obtained either in the primary market or the secondary market. Investment in this form of business translates to ownership of the business as the contract stands in perpetuity unless sold to another investor in the secondary market. The investor therefore possesses certain rights and privileges (such as to vote and hold position) in the company. Whereas the investor in debts may be entitled to interest which must be paid, the equity holder receives dividends which may or may not be declared.

The risk factor in this instrument is high and thus yields a higher return (when successful). Holders of this instrument however rank bottom on the scale of preference in the event of liquidation of a company as they are considered owners of the company.

3. **Preference Shares:** This instrument is issued by corporate bodies and the investors rank second (after bond holders) on the scale of preference when a company goes under. The instrument possesses the characteristics of equity in the sense that when the authorised share capital and paid up capital are being calculated, they are added to equity capital to arrive at the total. Preference shares can also be treated as a debt instrument as they do not confer voting rights on its holders and have a dividend payment that is structured like interest (coupon) paid for bonds issues.

Preference shares may be:

- **Irredeemable, convertible:** in this case, upon maturity of the instrument, the principal sum being returned to the investor is converted to equities even though dividends (interest) had earlier been paid.
- **Irredeemable, non-convertible:** here, the holder can only sell his holding in the secondary market as the contract will always be rolled over upon maturity. The instrument will also not be converted to equities.
- **Redeemable:** here the principal sum is repaid at the end of a specified period. In this case it is treated strictly as a debt instrument.

Note: Interest may be cumulative, flexible or fixed depending on the agreement in the Trust Deed.

4. **Derivatives:** These are instruments that derive from other securities, which are referred to as underlying assets (as the derivative is derived from them). The price, riskiness and function of the derivative depend on the underlying assets since whatever affects the underlying asset must affect the derivative. The derivative might be an asset, index or even situation. Derivatives are mostly common in developed economies.

Some examples of derivatives are:

- Mortgage-Backed Securities (MBS)
- Asset-Backed Securities (ABS)
- Futures
- Options
- Swaps
- Rights
- Exchange Traded Funds or commodities

Of all the above stated derivatives, the common one in India is Rights where by the holder of an existing security gets the opportunity to acquire additional quantity to his holding in an allocated ratio.

5.5 STOCK MARKET IN INDIA

From small beginnings in the 19th Century, India's stock market has risen to great heights. By 1990, we had 19 Stock Exchanges in the country and by 2002 there were 23 Stock Exchanges and by 2018 there were 21 stock exchanges as listed.

5.5.1 ORIGIN AND GROWTH

The origin of stock exchange in India can be followed as far as possible of the 18 century when the protections of East India Company were exchanged Bombay (presently, Mumbai) and Calcutta (presently, Kolkatta) During that time representatives used to assemble under a banyan tree in Mumbai and under a neem tree in Kolkatta to exchange m protections The genuine start came in the 1850 with the sanctioning of Companies Act, which presented business entities with constrained obligation. Other than this, improvement of correspondence and transport additionally supported the advancement of business entities in huge numbers In Mumbai high hypothesis in protections dealings during 1860s united agents and m July 1875 they shaped first officially sorted out stock trade in Quite a while viz "The Native Shares and Stock Brokers Association", which is presently prevalently known as Bombay Stock Exchange (BSE). The BSE is one of the premier stock trades in India and the most established in Asia The subsequent stock trade came to presence in 1894 under the name of "The Ahmedabad Shares and Stock Brokers Association" and later, the name of this trade was changed to Ahmedabad Stock Exchange. In the year 1908 the Calcutta

Stock Exchange Association appeared and later it is called Calcutta Stock Exchange. The Indore Stock Exchange came to presence in 1930, Madras Stock Exchange in 1937, Hyderabad Stock Exchange in 1943 and Delhi Stock Exchange in 1947 thus, during 1947 there were 7 stock trades in India. In 1956 Government of India passed a far reaching enactment for controlling the working of stock trades in India. During 1980s many stock trades were perceived under the Securities Contracts (Regulation) Act, 1956. These were Cochin Stock Exchange (1979), Uttar Pradesh Stock Exchange Association at Kanpur (1982), Pune Stock Exchange (1982), Ludhiana Stock Exchange Association (1983), Gauhati Stock Exchange (1984), Kanara Stock Exchange at Mangalore (1985), Magadh Stock Exchange Association at Patna (1986), Jaipur Stock Exchange (1989), Bhuvaneshwar Stock Exchange Association (1989), Saurashtra Kutch Stock Exchange at Rajkot (1989), Over the Counter Exchange of India [OTCEI (1989)], Vadodra Stock Exchange at Baroda (1990), Coimbatore Stock Exchange (1991), National Stock Exchange of India Limited (1992), and Inter Connected Stock Exchange of India Ltd [ICSEI (1998)]. At present there are 23 stock exchanges in India, out of these, only 8 stock exchanges are given permanent recognition and the remaining are given temporary recognitions, renewable periodically. In India stock exchanges have been constituted on different ideology i.e. public limited company, company limited by guarantee, an association of individuals, non-profit making association, etc. One of the important milestones in the growth of Indian stock market is the establishment of National Stock Exchange (NSE), Over the Counter Exchange of India (OTCEI), and Inter Connected Stock Exchange of India (ICSEI). The establishment of the NSE and November 1992 is a significant development in the history of Indian stock market. The capital market segment of NSE commenced trading in equities on November 3, 1994. In a short span of a decade, the NSE has emerged as the dominant stock exchange of India. NSE has out-performed Bombay Stock Exchange (BSE), partly due to its state-of-the-art technology. But the more important reason for NSE's success has been its business model that yields best results, particularly under competitive conditions. Because of its highly efficient trade and settlement systems, computerized nationwide network, it has captured most of the trading volumes from all other stock exchanges. All the stock trades, other than the BSE, have nearly been en route to close their business, as they couldn't contend with the NSE. In the subordinate fragment, NSE has procured syndication over the BSE and BSE is battling for its reality. The accomplishment of NSE can be credited to the spread of PC organization all through India, which made financial specialists everywhere to take an interest in the value market. Following the NSE, in March 1995, BSE has additionally presented screen based exchanging called BOLT (BSE On-Line Trading). Another significant sort of stock trade set up in India is Over the Counter Exchange of India (OTCEI) in light of the model of NASDAQ (National Association of Securities Dealers Automated Quotation) and JASDAQ (Japanese Association of Securities Dealers Automated Quotation). The conventional endorsement of the administration for the setting up of the OTCEI was conceded in August 1989 under the Securities Contracts (Regulation) Act, 1956, yet the real activities began in October 1992. The primary target of the foundation of OTCEI is to give market to littler organizations that couldn't bear to pay the posting charges of the enormous stock trades and didn't satisfy the base capital necessity for posting in the BSE and the NSE. The foundation of Inter-Connected Stock

Exchange of India (ICSEI) is another huge part of development of financial exchanges in India It began working from August 29, 1998 Inter-Connected Stock Exchange of India is a weakened form of the National Stock Market System (NSMS) prescribed by the M J Pherwani board.

5.5.2 ROLE AND FUNCTIONS

The main basic role and function of a stock exchange is to facilitate the transactions associated with both buying and selling of securities. Buyers and sellers of shares and stocks can track the price changes of securities from the stock markets in which they operate. There are some important role and function of stock exchange which are as follows.

1. **Reliable Economic Barometer:** A stock exchange is a reliable barometer to measure the economic condition of a country. Every major change in country and economy is reflected in the prices of shares. The rise or fall in the share prices indicates the boom or recession cycle of the economy. Stock exchange is also known as a pulse of economy or economic mirror which reflects the economic conditions of a country.
2. **Valuing of Securities:** The stock market helps to value the securities on the basis of demand and supply factors. The securities of profitable and growth oriented companies are valued higher as there is more demand for such securities. The valuation of securities is useful for investors, government and creditors. The investors can know the value of their investment, the creditors can value the creditworthiness and government can impose taxes on value of securities.
3. **Safety:** In stock market only the listed securities are traded and stock exchange authorities include the companies names in the trade list only after verifying the soundness of company. The companies which are listed they also have to operate within the strict rules and regulations. This ensures safety of dealing through stock exchange.
4. **Contribution in Economic Growth:** In stock exchange securities of various companies are bought and sold. This process of disinvestment and reinvestment helps to invest in most productive investment proposal and this leads to capital formation and economic growth.
5. **Healthy Speculation:** To ensure liquidity and demand of supply of securities the stock exchange permits healthy speculation of securities.
6. **Liquidity:** The main function of stock market is to provide ready market for sale and purchase of securities. The presence of stock exchange market gives assurance to investors that their investment can be converted into cash whenever they want. The investors can invest in long term investment projects without any hesitation, as because of stock exchange they can convert long term investment into short term and medium term.
7. **Better Allocation of Capital:** The shares of profit making companies are quoted at higher prices and are actively traded so such companies can

easily raise fresh capital from stock market. The general public hesitates to invest in securities of loss making companies. So stock exchange facilitates allocation of investor's fund to profitable channels.

- 8. Promotes the Savings habits and Investment:** The stock market offers attractive opportunities of investment in various securities. These attractive opportunities encourage people to save more and invest in securities of corporate sector rather than investing in unproductive assets such as gold, silver, etc.

5.5.3 MEMBERSHIP ORGANIZATION & MANAGEMENT

By prudence of the extremely old custom, stock trades is an exceptionally sorted out and smooth working system on the planet. The enrollment of stock trades at first involved people and organization firms. Later on organizations were likewise permitted to move toward becoming individuals. Various finance related organizations are presently individuals from Indian stock trades. Throughout the years, stock trades have been sorted out in different structures. For instance, while the Bombay Stock Exchange, Ahmedabad Stock Exchange and M.P. (Indore) Stock Exchange were sorted out as deliberate non-benefit making relationship of people, the Calcutta Stock Exchange, Delhi Stock Exchange, U.P. (Kanpur) Stock Exchange, Ludhiana Stock Exchange, Cochin Stock Exchange, Gauhati Stock Exchange, Jaipur Stock Exchange, and Kanara (Mangalore) Stock Exchange were sorted out as open restricted organizations. Many others have been sorted out as organizations restricted by ensure. The inward administration of each stock trade rests in a Governing Board Comprising Members of the Board and Executive Director/President. Individuals from the Governing Board incorporate intermediaries and non-dealers. Overseeing Bodies of stock trades likewise have government chosen people. The Executive Director/President is relied upon to guarantee severe consistence by all individuals from the trading of standards/by laws, edge guidelines and exchanging confinement, and so on. Subject to the past endorsement of SEBI, under the law, Governing Bodies of stock trades have wide powers to make bye-laws. Administering Bodies can concede, rebuff, reprimand and furthermore oust any part, any accomplice, and approved assistant and representative. It has the ability to mediate questions. Most importantly, it has the ability to make, correct, suspend and authorize rules, by-laws, and guidelines and manage the whole working of a stock trade.

5.5.4 TRADING SYSTEM

These are the following trading system which is followed under it.

- 1. Select a Broker/Sub-broker:** When a person wishes to trade in the stock market, it cannot do so in his/her individual capacity. The transactions can only occur through a broker or a sub-broker. So according to one's requirement, a broker must be appointed. Now such a broker can be an individual or a partnership or a company or a financial institution (like banks). They must be registered under SEBI. Once such a broker is appointed then you can buy/sell shares on the stock exchange.

2. **Open a Demat Account:** Since the reforms, all securities are now in electronic format. There are no issues of physical shares/securities anymore. So an investor must open a dematerialized account, i.e. a demat account to hold and trade in such electronic securities. So you or your broker will open a demat account with the depository participant. Currently, in India, there are two depository participants, namely Central Depository Services Ltd. (CDSL) and National Depository Services Ltd. (NDSL).
3. **Placing Orders:** And afterward the financial specialist will really put in a request to purchase or sell shares. The request will be put with his dealer, or the individual can execute on the web if the representative gives such administrations. One thing of basic significance is that the request/guidelines ought to be extremely clear.
4. **Execution of the Order:** Once the broker receives the order from the investor, he executes it. Within 24 hours of this, the broker must issue a Contract Note. This document contains all the information about the transactions, like the number of shares transacted, the price, date and time of the transaction, brokerage amount etc. Contract Note is an important document. In case of a legal dispute, it is evidence of the transaction. It also contains the Unique Order Code assigned to it by the stock exchange.
5. **Settlement:** Here the actual securities are transferred from the buyer to the seller. And the funds will also be transferred. Here too the broker will deal with the transfer. There are two types of settlements,
6. **On the Spot settlement:** Here we exchange the funds immediately and the settlement follows the T+2 patterns. So a transaction occurring on Monday will be settled by Wednesday (by the second working day)
7. **Forward Settlement:** Simply means both parties have decided the settlement will take place on some future date.

5.5.5 STOCK MARKET INFORMATION SYSTEM

Stock trade citations and lists distributed in day by day papers are the fundamental wellspring of data on stock trade exchanges and turnover. Dailies like Economic Times, Financial Express, Business Standard, Business Line, Times of India and Hindustan Times distribute day by day citations and files. With respect to Bombay Stock Exchange citations distributed in Economic Times, data on value shares, beginning from the principal segment, is displayed in the accompanying request: Company's name; earlier day's end cost in sections; all the day by day exchanged costs as distributed by the BSE ; key money related parameters, for example, income per share (EPS), money income per share (CPS), money P/E, return on total assets, and gross net revenue and so on various days; P/E; and the high and low costs in the first 52 weeks.

The first exchanged cost is the day's opening cost. In the event that just a single such cost is recorded, it is additionally the day's end cost. In the event that there are two costs, at that point the center statement is either the high or low cost. In the event that there are four costs, at that point one of the center

statements is the day's high and the other, the low. In the event that there are no exchanges in an organization's offer on quickly, the earlier day's end cost is displayed in sections. The EPS is the normal net benefit after expense per value share and the CPS the normal money benefit (subsequent to including back deterioration) per share. The money P/E is the proportion of the day's end cost to the money income per share as unmistakable from the P/E proportion, which relates cost to the net benefit per share. PE esteems are not printed when income are either nil or negative.

The RNW is the net benefit as a level of the total assets and measures the arrival earned on the investors' store for example value capital in addition to holds. The GPM is the gross net revenue (before deterioration and expense) as a level of gross deals and measures the organization's net revenue which is accessible to retain devaluation charges emerging from capital consumption, charge installments, profit conveyance and benefit plough back. Every one of the figures is taken from the most recent accessible outcomes (examined/unaudited) of the organization.

The 52-week high and low costs of each offer are worked out each day based on the most elevated and bottommost extremes scaled during the quickly going before 52 weeks. The high and low costs are balanced for reward and rights issue of value shares. On the off chance that any of the day's exchanged cost is a yearly high or low, the whole line, including the name of the organization, is appeared in intense kinds, with a 'H' joined to the high worth or 'L' appended to the low worth. At whatever point there is a critical change in the day's end an incentive when contrasted with the past shutting, it is appeared in striking kinds with an 'or more' or 'less' sign all things considered, after the end esteem. For determined offers, a three percent change and for non-indicated shares a 15 percent change is treated as critical. At whatever point an offer goes ex-partitioned or ex-reward or ex-rights, it is shown by documentation XD or XB or XR, as the case might be put by its end cost. Image of presumptive estimations other than Rs. 10 are likewise demonstrated alongside the names. Since Indian guidelines permit stock parts, various firms have assumed worth other than Rs. 10 for debentures, the data beginning from the main segment, is exhibited in the accompanying request: the ostensible pace of enthusiasm on the assumed worth, organization name, face esteem, earlier day's end value, the day's opening value, respect development (YTM) and yield (both annualized). The yield is ostensible intrigue communicated in rate terms of shutting esteem. The YTM changes the ostensible return for the development time frame, recurrence of premium installments, way of head reimbursement, reclamation premium, assuming any, and along these lines empowers financial specialists to think about various venture alternatives in debentures on a uniform scale. In the event that there are no citations for an organization's debenture on a day, the opening cost is appeared as nil, and the end value equivalent to the earlier day's end.

Other than these citations offer value lists are additionally distributed in various dailies. Bombay Stock Exchange's 30-share 'Sensex' and 100 - share 'National' files are very prevalent. What's more, NSE-50 (Nifty) has likewise turned out to be well known with institutional and retail financial specialists lately. Other than these, there are different records likewise which incorporate

The Economic Times Index of Ordinary Share Price, Business Standard Index of Ordinary Shares Price and a couple of others. Save Bank of India additionally distributes Share Price Index.

5.5.6 PRINCIPAL WEAKNESS

There are the so many principle weaknesses which are as follows:

1. **Lack of Professionalism:** The majority of stock brokers lack professionalism. They lack proper education, business skills, infra-structural facilities etc. which inhibits them to provide proper service to clients. They are not able to guide and counsel their clients in the manner expected of them.
2. **Domination:** Indian securities exchanges are ruled by a couple of budgetary organizations. The U.T.I., LIC, GIC are the fundamental players in Indian securities exchanges. The purchasing and selling by these establishments establishes the pace in the market. The market goes bullish if monetary establishments start purchasing shares; then again, it ends up bearish on their selling binge. After the progression procedure set moving since 1991 various remote money related foundations have likewise entered the market yet their job has so far been restricted. Despite the fact that monetary foundations bargain in just chose scrips however the entire market assessment is affected by their dealings. Under SEBI rules, an individual from shared assets have been enlisted yet they are focusing more on new issues (essential market) Financial foundations being developed financial aspects to enter securities exchanges yet their number is huge and couple of organizations can't impact the entire market as is done in India by three fundamental establishments. Besides, Indian money related organizations enjoy more in purchasing and less in selling. With the section of an ever increasing number of Indian and outside establishments, their impact in securities exchanges will bit by bit decrease. Some enormous administrators impact the assumption of stock trades in India. In Bombay Stock Exchange 3-4 administrators used to give orders. The instance of Harshad Mehta is outstanding in India. He made bullish conditions in Indian stock trades in the principal quarter of 1992 and BSE Sensex about multiplied in an exceptionally brief period. This counterfeit increment in costs of offers unfavorably influenced the contributing open and individuals endured immense misfortunes. It is the shortcoming of stock trade's working that a few administrators can make the estimation according to their enjoying.
3. **Poor Liquidity:** The Indian stock trades experience the ill effects of poor liquidity. Few scrip's are normally exchanged on stock trades. Out of more than 3,000 scrip's fewer than 500 scrip's are for the most part exchanged and even out of these 90 percent volume of exchange limits to between 200-250 scrip's. This implies different scrip's have exceptionally low liquidity. An ongoing overview into recurrence of exchanging demonstrated that portions of 207 organizations were exchanged each day, portions of 538 Companies were exchanged once every week, portions of

396 Companies were exchanged once of fortnight, portions of 954 Companies were exchanged once per month and portions of 959 organizations were exchanged once per year. These insights demonstrate the poor liquidity of a large portion of the offers. A merchant needs to sit tight for arranging off his property for a long-term. At the point when a financial specialist isn't certain of selling his offers at whatever point he needs cash then he will be debilitated to put resources into shares. There is colossal build-up of pending conveyances moreover. This is because of the act of short selling. The scrip's are not conveyed for longer periods which again make liquidity issue. SEBI is attempting to edge rules where this negligence will be diminished.

4. **Less Floating Stocks:** There is a scarcity of floating stock in Indian stock exchanges. The shares and debentures offered for sale are a small portion of total stocks. The financial institutions and joint stock companies which control over 75 percent of the scrip's do not offer them for sale. The U.T.I, G.I.C., L.I.C., etc. indulge more in purchasing than in selling. It creates scarcity of stocks for trading. The markets tend to be violate and amenable to manipulations in the absence of adequate floating stocks for trading.
5. **Speculative Trading:** The trading in stock exchanges is mainly speculative in nature. The operators try to derive benefit out of short-term price fluctuations. At Bombay Stock Exchange upto 5 percent and at other exchanges upto 10 percent transactions are genuine investment deals. The brokers try to create a sentiment in the market which will be beneficial to him. The genuine investors try to keep away from such markets.

5.5.7 DIRECTIONS OF REFORM

The ongoing structural reform push by the government like GST and inflation targeting will help lay the foundation for sustainable growth, says an UBS report. According to the global financial services major, notwithstanding the "gradual pace" of recovery on the ground, the government's current measures are steps in the right direction.

Some of the important measures regarding capital market reform are as follows:

1. **Establishment of Securities and Exchange Board of India (SEBI):** An important measure regarding capital market reforms is the setting up of Securities and Exchange Board of India (SEBI) as the regulator of equity market in India. Regulation of stock markets is important to ensure:
 - (a) That the equity markets operate in a fair and orderly manner,
 - (b) That the brokers and other professionals of the stock markets deal justly with their customers,
 - (c) That the corporate firms who raise funds through the market provide all information about themselves which the investors need to make intelligent investment decisions. Since its inception SEBI has been addressing itself to these tasks.

SEBI has introduced various guidelines and regulations for the functioning of capital markets and issuing and selling of shares in the primary market. The following important regulatory measures have been introduced by SEBI:

- (a) SEBI has introduced a code of advertisement for public issues by companies for making fair and truthful disclosures. The companies are now required to disclose all material facts and specific risk factors associated with their projects while making public issues.
 - (b) It has required the stock exchanges to amend their listing agreements to ensure that a listed company furnishes annual statements to them showing variations between financial projections and project utilisation of funds made in the offer documents and actual. This will enable shareholders to make comparisons between performance and promises made by of company.
 - (c) An important reform SEBI has introduced is that it has brought merchant banking also under its regulatory framework. The merchant bankers are required to follow the code of conduct issued by SEBI in respect of pricing and premium fixation of issues of shares companies.
 - (d) The practice of making preferential allotment of shares at prices unrelated to the prevailing price has been stopped by SEBI. Besides, to ensure transparency insider trading has also been banned.
 - (e) As a part of the process of establishing transparent rules for trading in stock exchanges, a notorious BADLA system has been banned and in its place Rolling Settlement System has been introduced.
2. **Setting up of Private Mutual Funds:** The important reform is the permission granted to the private sector firms to start Mutual Funds. Many private sector companies such as Tata, Reliance, and Birla have set up their mutual funds through which they raise money from the public. In this way monopoly position of UTI in Mutual Fund business has come to end. Mutual Funds raise money by selling units to the public and the funds so raised are invested in a number of equities and debentures of companies. A mutual fund may be entirely equity-based or debt-based or a balanced one having a particular combination of investment in equities and debentures of a number of companies. Investment in mutual funds enables the investors to reduce risk. Mutual funds have also been allowed to open offshore funds to invest in equities abroad. UTI has also been brought within the regulatory framework of SEBI.
 3. **Opening up to Foreign Capital:** A significant reform has been that Indian capital market has been opened up for foreign institutional institutions (FII). That is, FII can now buy shares and debentures of private Indian companies in the Indian stock market and can also invest in government securities. This has been done to attract foreign capital. Foreign Institutional Investors (FII) have been permitted full capital convertibility.

4. **Access to International Capital Markets:** The Indian corporate sector has been allowed to raise funds in the international capital markets through American Depository Receipts (ADRs), Global Depository Receipts (GDR), Foreign Currency Convertible Bonds (FCCBs) and External Commercial Borrowings (ECBs). Similarly, Overseas Corporate Bodies (OCBs) and Non-resident Indians have been allowed to invest in the equity capital of the Indian companies. FIIs have been allowed to invest in equities of private corporate Indian companies as well as in Government securities.
5. **Banks and Capital Markets:** Another important step to strengthen the Indian capital market is that banks have been allowed to lend against various capital market instruments such as corporate shares and debentures to individuals, investment companies, trusts and endowment share and stock brokers, industrial and corporate buyers and SEBI-approved market makers. Lending by banks against various capital market instruments to individuals, share and stock brokers, and market makers is made in accordance with certain norms regarding purpose, capital adequacy, transparent transactions, maximum possible amount or ceiling, or duration of the loan. Bank lending against shares and debentures, according to C. Rangarajan, will “enable partial liquidity to scrip’s, to help reduce volatility in price movement, encourage the presence of market makers so as to reduce market concentration and help in widening and deepening of trading in the secondary market.”

5.6 OVER THE COUNTER EXCHANGE OF INDIA (OTCEI)

It has been advanced mutually by UTI, ICICI, IDBI, SBI Capital Markets Ltd., IFCI, GIC and Canbank Financial Services Ltd. The Government has presented it the status of a 'recognised stock exchange' under Sec. 4 of the Securities Contracts Regulation Act. Thusly, organizations recorded with OTCEI will basically be at standard with organizations recorded on any stock trade in the nation.

The OTCEI is ‘floor-less exchange’ where all the activities are computerized be it trading, billing, payments, etc. OTC designated dealers operate through their computer terminals which are hooked to a central computer. All quotes and transactions are recorded and processed here.

The vendors are spread over the nation and approach the focal PC. In addition, PTI OTC sweep is accessible to every seller which shows the best offers and offers of the market producers in regard of every scrip. An exchange can be affected by entering the offer or offer in a vendor's PC counter. The accurate exchange cost along with different subtleties is additionally shown in the counter PC.

The trading documents of OTCEI include: (a) Counter Receipt (CR) which is handed over to the buyer when a deal is made. It is a tradable document and hence must be preserved carefully. It is akin to a share certificate so far as its

contents are concerned; (b) Sale Confirmation Slip (SCS) which is passed on to the seller when a deal is made. The seller also must preserve it carefully since he gets the payment against this slip later on.

Trading at OTCEI will be permitted only in respect of the securities of the listed companies. Listing may be obtained by (i) Companies with issued equity capital between Rs. 30 lacs to 25 crores; (ii) Closely held companies interested in listing; (iii) Venture capital companies; (iv) Companies which are not listed on any other recognised stock exchange provided:

- (a) they offer to the public at least 40% of the issued equity or Rs. 20 lacs, whichever is higher, where the issued equity ranges between Rs. 30 lacs to less than Rs. 300 lacs (i.e. 3 crores),
- (b) they offer to the public at least 60% of the issued equity is between 3 crores to 25 crores of rupees,
- (c) they offer at least 25% of the issued equity to the public in case of a venture capital company,
- (d) where the issued equity ranges between 3 crores to 25 crores of rupees, the norms for listing on a recognised stock exchange must be satisfied,
- (e) the company is not carrying on the business of investment, leasing, finance, hire-purchase or amusement parks.

The trading mechanism on OTCEI is quite different to other stock exchanges. It is based on a created tradable document called counter receipt (CR). Share certificates have to be converted to CR to begin trading. A Sale Confirmation Slip (SCS) is given to an investor when he sells the CR and the transaction is completed. A listed company may either make a direct sale to the public or offer for sale and bought out offer. In a direct public issue, a sponsor does not have to take any shares. If the sponsor takes up shares he can offer these later to the public and the price can be in accordance with the OTCEI.

If an investor purchases a security at a public offer he is issued a counter receipt which gives information about the investor as well as the company, share price, date of transaction, brokerage and total value of transactions. When an investor wishes to sell the security, he has to produce the counter receipt (CR). OTCEI promoters have been designated as 'sponsor members' and they alone are entitled to sponsor a company for listing here. Before recommending a company for enlistment, such members have to carry out the appraisal of the project to ensure its technological and financial viability. They also ensure that all government rules and regulations have been complied with. They are required to clarify the investment worthiness of the company and its project.

Finally, they would value the shares of the company, comply with SEBI guidelines for the issue of securities and manage the public issue. OTCEI requires such sponsor members to act as 'market makers' in that scrip for at least 3 years and also to appoint an additional market maker for that scrip for a period of at least one year. SEBI relaxed norms for listing on the OTCEI during March 1995. The minimum post- issue capital to be offered to the public to enable listing was

lowered from 40 per cent to 25 per cent. SEBI also permitted finance and leasing companies to get listed on the OTCEI.

In April 1995, OTCEI modified its guidelines to allow listing of finance companies-albeit with more stringency. The minimum issued capital was increased from Rs. 30 lakh to Rs. 1 crore for finance companies. Further, a three-year track record of profitability was made compulsory before listing takes place. The new guidelines also state that the OTCEI- sponsor of these companies should hold at least 10 per cent of the public offer as market making inventory as against 5 per cent for other companies. However, till December 1996, no companies engaged in finance or leasing services was listed on the OTCEI.

To facilitate offers for sale of bought-out deals, OTCEI changed its guidelines in January 1996. The revised guideline did away with the requirement of making an offer for sale of the entire bought-out deal to the public, except the market making inventory. The offered can now offer a minimum of 25 per cent of the bought-out deal to the public. At the same time, the ratio of involvement of OTCEI members to non-OTCEI members has been brought down from 60:40 to 10:90. These guidelines came into effect from 22 January 1996 and were made applicable to all the bought-out deals registered with SEBI and the offer documents for offers for sale which were awaiting SEBI clearance. Later in August 1996, SEBI exempted offers for sale of bought-out deals registered with OTCEI on or before 16 April 1996 from the new guidelines governing entry norms for public issues.

Briefly, the new guidelines issued by SEBI stated that any company wanting to make a public issue should have a track record of dividend payment for at least three in the immediately preceding five years before the making public issue. If companies do not satisfy this requirement, then they must at least get their project appraised by a financial institution or a nationalized bank which would participate in the public issue to an extent of at least 10 per cent of the total project outlay. The relaxation would benefit the 50-odd bought out deals registered with the OTCEI. With a view to review the working of the OTCEI and to make recommendations for its further improvement, SEBI appointed an eight-member committee under the chairmanship of Dr. S.A. Dave on 17 April 1996. On the recommendations of the Committee, SEBI has made the eligibility criteria for companies desirous of making a public issue very stringent. The companies unable to make a public issue as a consequence of these guidelines be allowed to seek listing on the OTCEI, albeit with some checks. Currently, only those companies which have a track record of dividend payment of three years out of the immediately preceding five years can make a public issue.

If the company does not have such a track record, then the project for which the company is entering the capital market needs to be appraised by a financial institution or a nationalized bank. Further, there should be a minimum participation of 10 per cent of the project outlay by the appraiser, in the form of equity or long-term debt. The committee has recommended that companies which do not satisfy these criteria should be allowed to get listed on the OTCEI provided they appoint a sponsor and two market makers to the issue. The committee has also recommended that companies which do not meet the minimum shareholding norm of having at least 5 shareholders for every Rs. 1 lakh of issued capital can

get listed on the OTCEI but should appoint sponsors and market makers. Companies which get delisted from regional stock exchanges should be allowed to list on the OTCEI since shareholders of delisted companies do not have a platform to off load their holdings. These companies should, however, be traded under a separate category on the OTCEI.

Further, all the companies discussed above should be allowed listing on the OTCEI with a minimum lock-in period of three years. After three years, these companies may either choose to remain on the OTCEI or seek listing on other stock exchanges. The committee has recommended that the ceiling of Rs.25 crore on the equity capital of a company seeking listing on the OTCEI be removed. It has also suggested that the current rolling settlement system of three days (known as $T \pm 3$) should be increased to five days. The committee has also stressed upon the need of increased involvement of the promoters of OTCEI. The main promoters of the exchange are Unit Trust of India, Industrial Development Bank of India, Industrial Credit & Investment Corporation of India, Industrial Finance Corporation of India, Life Insurance Corporation and General Insurance Corporation. The report points out that the some of these entities have promoted the National Stock Exchange which has grown at a much faster pace than the OTCEI. One recommendation for increased promoter participation is that the promoters should have an OTCEI-dedicated fund of a corpus of around Rs.100 crore which would invest in fundamentally sound companies of the OTCEI.

OTCEI is intended to provide easy marketability and better liquidity of securities to an investor. Besides, it also offers facilities for transfer of shares listed here. The investor can submit the transfer documents at any of the OTCEI counters in the country. There is total transparency and fairness so far as the deals are concerned. It takes lesser time to finalize a deal too. The companies listed with OTCEI are also benefitted to a large extent. Raising of funds becomes cheaper since they are priced fairly and the investor base is large. The company can obtain enlistment even with 40% public issue (which is 60% in case of listing on a recognised stock exchange). The company has also the option of allotting all the shares to a sponsor. In this case, the company has only to negotiate the issue price with the sponsor who finally markets the issue. Despite being in existence for a number of years, the exchange does not have a major presence amongst stock exchanges of the country. Its focus was to have transparency in transactions and to help new projects or existing companies to expand their activities by raising capital in a cost effective manner. It was formed through a consortium of financial institutions like UTI, ICICI Bank, IDBI, IFCI, LIC, GIC, SBI and Can Bank Financial Service Ltd.

5.8 SUMMARY

In this Unit, we have talked about two fragments of Indian protections showcase in particular primary market or new issues market and secondary market or stock exchange. We have featured ongoing patterns in the essential market and talked about different sorts of market players and exchanging plans which exist in the Indian securities exchange. Various parts of the Indian securities exchange viz., origin and development, role

and function, membership organisation and the management, trading system, stock market information system and principal weakness have been clarified with the direction of reform that you as an understudy of this course can obviously imagine the earth wherein venture and portfolio the board choices are made. In the end of this unit we will discuss on the over the counter exchange of India.

5.8 SELF-ASSESSMENT QUESTIONS

- Q.1. What are the basic components of the securities market?
- Q.2. Describe the different types of securities markets. What are their role and functions?
- Q.3. What are different categories of players operating in primary and secondary markets?
- Q.4. Describe the management of stock exchanges in India in brief.
- Q.5. Discuss recent trends in the development of the primary market in India in brief.
- Q.6. What is OTCEI? How is this different from other stock exchanges?
- Q.7. What is NSE? How does it differ from other stock exchanges?
- Q.8. Critically evaluate stock market indices as indicators of the mood of the market and health of the economy.

5.9 REFERENCES

- Bombay Stock Exchange Official Directory, Bombay Stock Exchange, Bombay
- Gupta, L.C. 1992, Stock Exchange Trading in India-Agenda For Reform, Society For Capital Market Research and Development, New Delhi.
- SEBI Act and Regulations on various intermediaries and capital offerings

UNIT-6 REGULATION OF OTCEI

UNIT FRAMEWORK

- 6.1 Purpose
- 6.2 Introduction
- 6.3 History of Securities Market Regulation
- 6.4 Regulation of Secondary Market
- 6.5 Regulation of Primary Market
- 6.6 Regulation of OTCEI
- 6.7 Summary
- 6.8 Self-Assessment Question
- 6.9 Text and References

6.1 PURPOSE

The objectives of this unit are:

- To discuss history of securities market regulation
- To explain the regulation of secondary market;
- To list the insider trading and buyback of share,
- To identify the regulation of primary market,
- To describe the pre-issue obligations and post-issue obligations and contents of the prospectus,
- To discuss over the regulations of OTCEI

6.2 INTRODUCTION

Over The Counter Exchange of India (OTCEI) can be defined as a stock exchange without a proper trading floor. All stock exchanges have a specific place for trading their securities through counters. But the OTCEI is connected through a computer network and the transactions are taking place through computer operations. Thus, the development in information technology has given scope for starting this type of stock exchange. OTCEI is recognized under the Securities Contract (Regulation) Act and so all the stocks listed in this exchange enjoy the same benefits as other listed securities enjoy.

Today, fewer differences exist among traditional exchanges and OTC networks, due to advances in technology that allow for improvements in electronic quotation and trading. These have facilitated higher liquidity and better information sharing. However, on a formal exchange, each party is exposed to offers by every other counterparty. In dealer networks, this may not be the case, given less transparency and less stringent regulation on these exchanges.

6.2.1 NEED FOR STARTING OTCEI

Many small companies in India are finding it difficult to raise adequate capital through Stock Exchanges as the conditions stipulated by them could not be fulfilled. The companies must have run for minimum three years and they must have earned profit and the minimum capital requirement for listing is also quite high. Hence by promoting a new Stock exchange with flexible conditions, the small and medium companies in India will be able to raise sufficient capital. Once these companies enlarge their resources, they can list themselves in the regular stock exchanges.

6.2.2 PROMOTION OF OTCEI

OTCEI has been incorporated under Section 25 of the Companies Act. As a result of which the word 'Limited' need not be used since it is promoted for a common cause of promoting the interest of small and medium companies. This privilege has been given to the company by the Central Government.

This company was promoted by a group of financial institutions owned by the Government of India, consisting of UTI, ICICI, IDBI, SBI Capital Market, IFCI, LIC, GIC; and Can Bank Financial Services (which is a subsidiary of Canara Bank).

6.3 HISTORY OF SECURITIES MARKET REGULATION

The essential regulatory measure obliging rule of stock exchanges was approved in 1925 specifically, the Bombay Securities Contracts Control Act 1925. This Act was approved to oversee and control certain understandings for the purchase and closeout of securities in the city of Bombay and elsewhere in the Bombay Presidency. Without a doubt till then there were no settled trading rules. The open was not denied from entering the trading floor, where clients much of the time executed business among themselves. The prerequisite for rule had risen to check control by agents, which had realized two outrageous market crashes some place in the scope of 1919 and 1925. In 1918-19 a couple of vendors controlled the expense of two significantly traded stocks Standard Mill and Madhav ji Mill realizing a mishap. Fourteen authorities defaulted, driving them to sell their cards. The open examination that sought after the manipulative practices and the market hang of the mid 1920s moved the Bombay Legislative Council to set up a leading body of trustees to research the activities of the Bombay Stock Exchange Sir Wilfred Atlay, past official of the London Stock

Exchange, was picked to head the warning gathering. In its report the warning gathering communicated "The most malevolent sign of hypothesis in Bombay is the progressing occasion of corners in the market and the methodology and practice of the Association as to corners appears to us to set up the head and front of their punishable."

For sure, even before the organization of Bombay could consider movement dependent on the Atlay Committee Report, the exchange experienced another mishap in 1925. Before long, the Securities Contracts Control Act 1925 was passed by the organization of Bombay. Under that Act, "stock exchange" was described as "any alliance, affiliation or collection of individuals, paying little mind to whether joined or not, developed to help, coordinating and controlling business in acquiring, selling and overseeing in stocks, shares, bonds, debentures, debenture stock and some other like insurances". Zone 4 of the Act required a stock exchange expected to submit rules for the rule and control of trades in assurances other than arranged pass on understandings and outfit such information as for such affirmation as the Governor-in-Council may require. Territory 6 of the Act gave that every consent to the purchase or closeout of assurances, other than a readied transport contract, went into after a date to be told for this advantage by the Governor-in-Council should be void with the exception of if the equal was made ward upon and according to the rules suitably embraced under portion 4 and each such understanding should be void aside from if the proportional was made between people or through a person from an apparent stock exchange; and no case should be allowed in any accommodating court for the recovery of any commission, business charge or reward in respect of any such understanding. Nevertheless, this Act portrayed "arranged transport contract" to connote "an understanding of the purchase or leeway of securities for execution of which no time is demonstrated and which is to be performed rapidly or inside a reasonable time". It was in like manner communicated in that by technique for explanation that what was reasonable time was in each particular case an issue of truth. This Act didn't achieve its inspiration, for under zone 6 thereof understandings went into in disavowal to the courses of action of that section were not made illegal anyway simply void with the result that even people from a stock exchange not saw under the Act had the choice to cooperate in that line. What's more, the explanation to the importance of "arranged movement contract" which was disallowed from the action of the Act was adaptable to such a degree that for arranged transport contracts, unrecognized stock exchanges and individuals had the alternative to carry on business in forward understandings. Wagering in offers went on unchecked in Bombay as elsewhere. It was, henceforth, found that the impact of this Act on the rule of trading insurances was not basic.

Huge hardships suffered by the contributing open during 1928 and 1938 conveyed open investigation and the Government of Bombay chose a board called Morrison Committee in 1936. Proposition made by this board were not seen as significant. The Government of India assigned a leading body of trustees in May, 1948, headed by Dr. P J Thomas, Economic' Advisor to the Ministry of Finance, to exhibit a report on a sensible law to coordinate the stock exchanges India. Under the constitution of India 'Stock Exchanges' is a central subject vide entry 48 in list (affiliation list) in the seventh schedule and thusly, the Union Government

has first class position to make laws in regards to the issues. In 1952, a draft Bill on Stock exchange rule was set up by the Government and this Bill was insinuated a pro board under the chairmanship of A D Gorwala A Bill called the Securities Contracts (Regulation) Bill, orchestrated on the lines of the draft recommended by the Gorwala Committee was introduced in Parliament in 1954 and with specific adjustments Securities Contracts (Regulation) Act, 1956 was passed. The Securities Contracts (Regulation) Act, 1956 nearby the Securities Contracts (Regulation) Rules of 1957 have been the guideline laws controlling insurances publicize in India

6.4 REGULATION OF SECONDARY MARKET

Secondary market regulations protect investors by curbing insider trading and through regulations governing the buyback of shares by the company.

6.4.1 INSIDER TRADING

An insider is any person, who is or deemed to be or was connected with the company and who is reasonably expected to have access, by virtue of such a connection, to unpublished, price sensitive information about the securities of the company. Unpublished, price-sensitive information pertains to any information which is of direct or indirect concern to the company and is not generally known or published, but which, if published or known, might materially affect the price of the securities of that company in the market. The following information is deemed to be price sensitive:

- a. Periodical financial results;
- b. Intended declaration of interim/final dividends;
- c. Issue of securities/buy back;
- d. Major expansion/new projects;
- e. Amalgamation/takeovers;
- f. Disposal of whole/substantial part of the undertaking; and
- g. Any significant change in policies, plans, or operations of the company.

The insiders of a company (directors/promoters/officers/designated employees, and others) are prohibited from trading in shares/ securities of the company based on unpublished, price-sensitive information.

SEBI has given a model code of internal procedure and conduct for implementation and compliance by companies and others associated with the securities market. As per the code:

- The compliance officer of the company (a senior level employee) is made responsible for the preservation of price-sensitive information and pre-clearing of trading in securities of designated employees and their dependents. The compliance Officer maintains a record of designated

employees who will include officers of the top three tiers of the management and all employees of the finance department. Specific employees may also be designated by the company for this purpose.

- The unpublished, price-sensitive information should be disclosed by the company only to those within the company who need the information for the discharge of their duties and in whose possession the information will not give rise to a conflict of interest or misuse.
- The company has to specify a trading period (trading window) during which trading of securities can be done by the directors/officers/designated employees. They cannot trade in the company's securities during the period when the trading window is closed.
- The trading window will be closed, among others, at the time of declaration of financial results/dividends (interim/final), decisions are taken using price sensitive information. The trading window for the insider will be opened 24 hours after the above information is made public. The trading window can be closed during other periods also, at the discretion of the company.
- All directors/officers/designated employees should get a preclearance of the transactions in securities that they intend to deal. The company is permitted to fix a minimum threshold limit above which such preclearance would be required. An application has to be made by such a person, giving prescribed particulars to the compliance officer. Once the compliance officer gives his approval, the person concerned has to execute the order within a week. Moreover, if securities are acquired, the same has to be held for a minimum period of 30 days.
- The compliance officer has to place before MD/CEO/a committee all the details of the dealings in securities by employees/ directors/officers. This is to be done on a monthly basis.
- The company has to ensure that adequate and timely disclosure of price-sensitive information is given on continuous and immediate basis to the stock exchanges. The compliance officer has to approve and oversee the disclosures. The company has to lay down the procedure for responding to any queries/ requests for verification of market rumors by stock exchanges. The compliance officer is also responsible for deciding whether a public announcement is necessary for verifying/denying rumours and then make the disclosure. The disclosure has to be done through various media/company web site. Information sent to stock exchanges may be put on the website. While dealing with institutions, only public information has to be provided. At least two company representatives should be present at meetings with institutions and discussions should preferably be recorded.

6.4.2 BUYBACK OF SHARE

The SEBI regulations on buy-back apply only to listed securities and as such unlisted securities issued through private placement or otherwise fall. A

company, authorized by a resolution passed by the board of directors at its meeting to buy back its securities, may buy back its securities subject to the following conditions:

It should be authorized by the articles of association of the company.

- A special resolution has been passed at the general meeting of the company authorizing the buy back.
- If the buyback is or less than 10 percent of the total paid up equity share capital, a resolution at the general meeting is not needed to be passed rather a simple board resolution is enough.
- Provided that no offer of buy back shall be made within three sixty five days reckoned from the date of proceeding offer of buy back.
- The buyback is or less than 25 percent of the total paid up equity share capital and free reserves
- The ratio of debt owned by the company is not more than twice the capital and its free reserves after such buy back.
- All the shares or other specified securities for buy back are fully paid up.
- The buyback of shares or other specified securities listed on any recognized stock exchange is in accordance with the regulations made by the securities and exchange board of India in this behalf:
- The buy back in respect of shares and other specified securities other than those specified in the aforesaid clause is in accordance with the guidelines specified.

6.5 REGULATION OF PRIMARY MARKET

Securities and Exchange Board of India [SEBI] is a regulator of securities market in India. Initially, it was formed for the purpose of observing the activities afterward in May 1992, Government of India granted legal status to SEBI. SEBI has introduced various guidelines as regulatory measures for capital issues.

6.5.1 ISSUES OF SHARES

When a company make public issue of shares for the very first time it is referred to as Initial Public Offering. Process of Initial public offering as per the guidelines of SEBI includes:

(a) Filing of Offer Document-

- No company shall make any public issue of securities, unless a draft prospectus has been filed with the Board, through an eligible merchant banker at least 21 days prior to the filing of Prospectus with the Registrar of Companies.

- No listed company shall make any issue of securities through a rights issue where the aggregate value of securities, including premium, if any, exceeds Rs. 50 lacs, unless the letter of offer is filed with the Board, through an eligible merchant banker, at least 21 days prior to the filing of the letter of offer to the Regional Stock Exchange.
- No company shall make an issue of securities if the company has been prohibited from accessing the capital market under any order or direction of the Board.
- No company shall make any public issue of securities unless it has made an application for listing of those securities in the stock exchange.
- No company shall make public or rights issue or an offer for sale of securities, unless the company enters into an agreement with a depository for dematerialization of securities, and the company gives an option to investors to receive the security certificates in dematerialized form with a depository.
- No company shall make a public or rights issue of equity shares unless all the existing partly paid-up shares have been fully paid or forfeited in the specified manner.
- No unlisted company shall make a public issue of equity share, if there are any outstanding financial instruments or any other right which would entitle the existing promoters or shareholder; any option to receive equity share capital after the initial public offering (IPO).
- Companies not fulfilling the aforesaid conditions can raise their funds by listing in Over The Counter Exchange of India (OTCEI)

(b) Pricing Securities

- There is no restriction on the price at which shares can be issued. The price can be decided freely by the issuer company and the lead managers.
- A company may charge different prices for firm allotment and public offer, however price for firm allotment should be higher than the price at which public offer is made.
- A listed company making a composite issue of capital may issue securities at different prices in its public and rights issues.
- Issuer Company can mention a price band of 20% in the offer documents with the Board and actual price can be determined at a later date before filing of the offer document with Registrar of Companies. The final offer document should contain only one price.
- No payment, direct or indirect in the nature of a discount, commission, and allowance or otherwise shall be made either by the

issuer company or the promoters in any public issue, to the persons who have received firm allotment in such public issue.

- An eligible company is free to make public or rights issue of shares in denomination of Re. 1, Rs. 5, Rs. 10, Rs. 50, or Rs. 100 etc., if shares are issued in demat form. The shares cannot be issued or altered to a denomination of decimal of a rupee.

6.5.2 OTHER ISSUE REQUIREMENTS

(a) Public Issue by Unlisted Companies

- An unlisted company shall make a public issue of any equity shares or a security convertible into equity shares at a later date subject to the following
- It has a pre issue net worth of not less than Rs. one crore three out of preceding five years, with a minimum net worth to be met during immediately preceding two years ; and
- It has a track record of distributional profits in terms of section 205 of the Companies Act, 1956, for at least three out of immediately preceding five years.
- The issue size, i.e. offer through offer document + firm allotment + promoters' contribution through offer document does not exceed five times the pre issue net worth.
- If an unlisted company does not comply with the conditions of track record or if its issue size exceeds five times the pre issue net worth, it can make a public issue of equity shares or – i security convertible into equity shares at a later date, only through the book building process provided that 60 % of the issue size shall be allotted to the qualified institutional investors (QIB – otherwise the full subscription moneys shall be refundable.

(b) Public Issue by Listed Companies

- A limited company shall be eligible to make a public issue of equity shares or any security convertible into equity shares provided that the 'issue size' does not exceed five times its pre-issue net worth.
- If a company does not fulfill the above condition of issue size it shall be eligible to make a public issue only through the book-building process provided that 60% of the issue size shall be allotted to qualified institutional buyers (QIBs).
- Special provisions have been laid in respect of companies in the IT sector.

A company cannot make any further issue of capital by way of issue of bonus shares, preferential allotment, rights issue, or public issue, till the securities in the offer document have been listed or application moneys refunded on account

of non-listing or under subscription. When a company has in its books fully convertible debentures (FCDs) or partly convertible debentures (PCDs) that are not yet converted, it cannot issue any shares by way of bonus or rights. If such other issues are made, similar benefit must be extended to the holders of the FCDs or PCDs through reservation of shares in proportion to their holding. The share so reserved may be issued at the time of conversion(s) of such debentures on the same terms on which the bonus or rights issue was made.

An issuer company cannot withdraw a rights issue after the announcement of a record date in relation to such an issue. In cases where the issuer has withdrawn the rights issue after announcing the record date, the company cannot make an application for a listing of any securities for a minimum period of 12 months from the record date.

6.5.3 PRE-ISSUE OBLIGATIONS AND POST-ISSUE OBLIGATIONS

SEBI has issued detailed guidelines with regard to both pre issue obligations as well as post-issue obligations. Appointment of ‘lead merchant banker’ to manage the public issue is compulsory. The lead merchant banker is responsible for following various guidelines issued by SEBI. He is expected to exercise due diligence and the standard of due diligence shall be such that the merchant banker shall satisfy himself about all aspects of offering, veracity and adequacy of disclosure in the offer documents. The liability of the merchant banker continues even after the completion of issue process.

- The lead manager shall submit following documents to SEBI: Memorandum of Understanding (MOU) between lead merchant banker and Issuer Company specifying their mutual rights, liabilities and obligations relating to the issue. Due diligence certificate by lead merchant banker as specified in Schedule III along with draft prospectus. Certificates signed by the company secretary or chartered accountant in case of listed companies making further issue of capital as regard to dispatch of all refund orders of previous years in time and in the prescribed manner, dispatch of security certificates, and listing of securities on the stock exchanges. A list of persons who constitute the promoters group and their individual share holdings. Draft prospectus in computer floppy in prescribed format. Ten copies of draft offer document. The issuer shall submit an undertaking to the Board to the effect that transactions in securities by promoter, the promoter group and the immediate relatives of promoters between the date of filing of offer documents with Registrar of Companies or Stock Exchange as the case may be and the date of closure of issue will be reported to stock exchange within 24 hours of the transactions.
- In case a public or rights issue is managed by more than one merchant banker, the rights obligations and responsibilities of each merchant banker shall be demarcated as specified in Schedule II Other intermediaries such as advisor, bankers to the issue, registrar, underwriters etc. shall be appointed in consultation with lead merchant banker.

- However, if an issue is underwritten, the unsubscribed portion has to purchase by the underwriters. The lead merchant bankers shall satisfy themselves about the ability of the underwriters to discharge their underwriting obligations. In respect of every underwritten issue, the lead merchant bankers shall undertake a minimum underwriting obligation of 5% of the total underwriting commitment or Rs. 25 lakh whichever is less. The outstanding underwriting commitments of a merchant banker should not exceed 20 times its net worth at any point of time.
- The draft offer document filed with the Board shall be made public for a period of 21 days from the date of filing the offer document with the Board. The lead merchant banker shall also fill the draft offer document with the stock exchange where the securities are proposed to be listed ; and make it available to the public.
- An issuer company shall appoint a compliance officer who shall directly have liaison with the Board with regard to compliance with various laws, rules, regulations and other directives issued by the Board.
- The minimum number of collection centres for issue of capital shall be (a) four metropolitan cities situated at Mumbai, Delhi, Calcutta and Chennai; (b) all such centres where the stock-exchanges are located in the region in which registered office of the company is situated.
- The offer documents/prospectus shall be finalize; on the basis of complaints received and observations made by SEBI, if am Lead manager shall certify that all amendments, suggestions or observation; made by SEBI have been carried out. He has also to furnish a new due diligence certificate. Final prospectus is to be submitted with Registrar of Companies and the offer document with regional stock exchange. A computer floppy of fine prospectus/letter offer shall be submitted to SEBI.
- Application form must be accompanied by abridge prospectus. Disclaimer clause of SEBI should be printed in bold. Highlights and risk factors should be given same prominence. It should also contain instruction to mention application form number on the back of cheques, demand draft or the stock invests as the case may be. Application forms for new issue can be made available through internet, newspaper, photocopies in addition to conventional system of preprinted applications. The form shall contain provision for mentioning name and address of bank and account number of the applicant it should also provide for mention of income-tax permanent account number (PAN).
- Minimum application money to be pay by an applicant along with application shall not be less than 25% of issue price Application for shares or debenture should be for such a number that the ton amount payable is not less than Rs. 2000.
- The securities offered to public shall be listed in a stock exchange. In case these are not listed, entire application money become refundable.

- Subscription for public issues shall be kept open for at least 3 working days and not more than 10 working days. However, in case of an infrastructure company, it may be kept open for 21 working days. Rights issue shall be kept open for at least 30 days and not more than 60 days.
- The quantum of issue whether through a rights or a public issue, shall not exceed the amount specified in the prospectus/letter of offer, however an oversubscription to the extent of 10% of the net offer to public is permissible for the purpose or rounding off to the nearer multiple of 100 while finalizing the allotment.
- The merchant banker shall ensure compliance with the post-issue obligation as specified in the guidelines. He shall assign high priority to investor grievances and take all preventive steps to minimize the number of complaints. He shall also set up proper grievance monitoring and redressal system in coordination with the issuers and registrars to the issue, and take all necessary measures to resolve the grievances quickly. The merchant banker shall actively associate with the post-issue refund and allotment activities and regularly monitor grievances arising there from. The concerned lead banker shall submit the post-issue monitoring reports as specified.

6.5.4 CONTENTS OF THE PROSPECTUS

The offer document (prospectus) contains all material information that is true and adequate so as to enable investors to make an informed decision on investment in the issue. The prospectus has information on the following:

- Availability of application forms, prospectus, and mode of payment.
- Undertaking by the issuer company to fulfill issue obligations.
- Issue details such as issue period, issue size, issue type, face value, tick size, minimum order quantity, IPO market timings, lead managers, and members of issue.
- Particulars of issue such as objects of the issue, project cost, means of financing.
- Project appraisal document.
- Company management stating the personnel and their qualification.
- Location of the project.
- Infrastructure facilities.
- Schedule of project implementation.
- Product details.
- Future prospects in terms of capacity and capacity utilization.
- Stock market data.
- Project financials.

- Financial data (Income statement and balance sheet) of the company and group companies.
- Basis for issue price such as pre-issue earnings per share, pre-issue P/E and comparison with industry P/E, and average return on net worth.
- Outstanding litigation of defaults.
- Risk factors and management perception of the same.
- Method of arrangements made for disclosure on investor grievances.
- Minimum subscription.
- Expenses of issue for issue advisors, registrar to issue, issue manager and trustee for the issue.
- Particulars of underwriting commission and brokerage.
- Details of previous issue.
- Information on directors of the issue company.
- Rights of members in respect of restriction or transfer of shares.
- Material contracts and place of inspection of documents.

6.6 REGULATION OF OTCEI

The full form of OTCEI is Over-the-Counter Exchange of India, is situated in Mumbai. It is India's first exchange for small companies, as well as the first screen-based nationwide stock exchange in India. OTCEI was set up to access high-technology enterprising promoters in raising finance for new product development in a cost-effective manner and to provide a transparent and efficient trading system to investors. OTCEI is promoted by the UTI, Industrial Credit and Investment Corporation of India, IDBI, IFCI, and other institutions, and is a recognized stock exchange under the SCR Act. Over The Counter Exchange of India was founded in 1990 under the company act 1956 and was recognized by the Securities Contracts Regulation Act, 1956 as a stock exchange. The OTCEI is no longer a functional exchange as the same has been de-recognised by SEBI vide its order dated 31 Mar 2015.

Stock Exchange is a platform where the trading of securities happens in an organized manner. The securities may be shares or debts. The stock exchange has not been defined under any Act, but the commercial definition is generally accepted. Securities and Exchange Board of India, established in 1992, is the principal regulator of stock exchanges in India. Securities are financial assets that are tradable and can be divided into three categories- Equity securities (stocks), Debt securities (bonds) and Derivative securities. The trading of securities can be done on an exchange or over the counter. So, basically stocks are a subset of securities. Securities are freely transferable, i.e., they can be transferred from one person to another without notifying the company whose stocks are being traded.

The SEBI Act enumerates the powers with respect to regulating the stock exchange. The act has conferred a wide variety of powers to SEBI. Some of the

most important powers of SEBI with respect to regulating the Indian stock market are listed below:

6.6.1 SPECIFYING RULES AND REGULATIONS

SEBI has the authority to specify rules and regulations to control the stock exchange. For example, the timings i.e. opening (9.15 am) and closing (3.30 pm) time of the market has been set by SEBI, and it retains the right to change the timing if required.

6.6.2 PROVIDING LICENSES TO DEALERS AND BROKERS

Every dealer or broker requires a prior approval and license from SEBI to start distributing securities to investors. It also reserves the right to withhold or cancel the license of brokers and dealers not adhering to guidelines.

6.6.3 REVIEWING THE PERFORMANCE OF VARIOUS STOCK EXCHANGES

The regulating body is also responsible for the performances of various stock exchanges and bringing transparency in their functioning.

6.6.4 CONTROLLING MERGERS, ACQUISITIONS AND TAKE-OVERS OF THE COMPANIES

Some companies try to manipulate stocks and buy a majority stake in other companies with an intention of a take-over. SEBI controls and prohibits such movements if it is not in the interest of the company.

6.6.5 PROHIBITING UNFAIR TRADE PRACTICES IN THE MARKET

While SEBI has laid down specific guidelines that promote fair trade practices, many companies occasionally undertake activities that are not healthy for the market. SEBI has the power to prohibit such activities and take action against the parties involved in such a trade. Penalties may range from Rs 25 crores or 3 times the profits made out of such failure, whichever is higher.

6.6.6 PROTECTIVE FUNCTIONS

- To check unfair trade practices in respect to share / security market.
- To check insiders trading in shares / securities.
- To provide education relating to dealing in securities to the investors.
- To provide a code of conduct relating to the security market.

6.6.7 REGULATORY FUNCTIONS

- To regulate the business doing done in the share / securities market.
- To register and regulate the various venture capital funds.
- To carry out an audit of the share markets.
- To register and regulate the credit rating agency.

6.6.8 DEVELOPMENTAL FUNCTIONS

- To impart training to the various Intermediaries.
- To encourage self-regulating organizations.
- To carry on research work.
- To publish various kinds of information for the education & convenience of all the parties operating in the capital markets.

6.7 SUMMARY

OTCEI concept is a great innovation in the Indian Stock market. It is a recognized stock exchange under the Securities Contract (Regulations) Act, 1965 as well as the Indian Companies Act. OTCEI is a computer based screen system exhibiting the quotations of the scrips of the companies of different industries of the nation. It has a national network and there is no geographical barrier for listing. Dealers and Investors can take decisions on the spot more quickly than on the regular stock exchanges. It is a great boom to the small and marginal investors who are greatly neglected till today.

OTCEI was incorporated in October 1990. This company was promoted by a consortium of premier financial institutions, namely, UTI, ICICI, IDBI, SBI Capital Markets Ltd., IFCI, QIC and its subsidiaries and Canbank Financial Services Ltd. OTC Exchange is recognized by the Government of India as a “recognized stock exchange” under section 4 of the Securities Contract Regulations Act, 1965.

Companies listed on the OTCEI will enjoy the same listing status as available to other companies listed on any other stock exchange in the country except that a company listed on OTCEI cannot be listed /traded on any other stock exchange in India. The corporate office is situated in Bombay. It started functioning in 1992.

OTCEI has been linked to 42 centers all over India through computers. OTCEI operates with the use of INET the country’s first public switched data network and Telex – the first nationwide information dissemination network and RABMN – Remote Area Business Message Network.

Any counter in any of the four hundred cities in India can receive the scrip prices, which are generated by OTCEI’s central computer in Bombay. Any person

or Indian citizen can apply for dealership or membership of the OTC provided he adheres to the prescribed conditions.

The aspirants would also have to pass a computer -based written test. Preference would be given to professionals and people having experience in the field with sound network. Those having proper infrastructural facilities like telephone, computers, telex, fax, office space and other networks would also be given due weightage and preference.

6.8 SELF-ASSESSMENT QUESTION

1. What do you understand by OTCEI? Discuss in brief.
2. Describe the history of securities market regulation in India.
3. Discuss the regulation of secondary market in India.
4. Explain insider trading and buyback of share.
5. What are the regulations of primary market in India? Discuss it.
6. What are pre-issue obligations and post-issue obligations and contents of the prospectus? Explain it.
7. Discuss the regulations of OTCEI.

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Web Sites:

- U.S. Security Exchange Commission: www.sec.gov
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- SEBI, India: www.sebi.gov.in

UNIT-7 SECURITIES AND EXCHANGE BOARD OF INDIA

UNIT FRAMEWORK

- 7.1 Purpose
- 7.2 Introduction
- 7.3 Origin of SEBI
- 7.4 Functions of SEBI
- 7.5 Organisation of SEBI
- 7.6 Activities of SEBI
- 7.7 Self-Regulation
 - 7.7.1 Role of Self-Regulatory Organisation
 - 7.7.2 Eligibility Criteria to Become SRO
- 7.8 Summary
- 7.9 Self-Assessment Question
- 7.10 Text and References

7.1 PURPOSE

- To discuss origin and functions of SEBI
- To explain the organisation of SEBI;
- To list the activities of SEBI,
- To identify the self-regulation,
- To describe the role of self-regulatory organisation,
- To discuss over the eligibility criteria to become SRO.

7.2 INTRODUCTION

The Securities and Exchange Board of India was established on April 12, 1992 in accordance with the provisions of the Securities and Exchange Board of India Act, 1992. The Preamble of the Securities and Exchange Board of India describes the basic functions of the Securities and Exchange Board of India as ". To protects 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".

Securities and Exchange Board of India (SEBI) is a regulatory body of the Government of India. It controls the securities market. It was established on April 12, 1992 under the SEBI Act, 1992. SEBI is headquartered at the Bandra Kurla Complex in Mumbai, India. It has regional offices in major cities of India such as New Delhi, Kolkata, Chennai, and Ahmedabad. These cover the North, South, East, and West regions of India. Besides, it has a network of local branch offices in prominent Indian cities.

7.3 ORIGIN OF SEBI

By a Notification issued on 12th April, 1988, Securities and Exchange Board of India (SEBI), was constituted as an interim administrative body to function under the overall administrative control of the Ministry of Finance, Government of India. In July 1988, the SEBI, constituted as aforesaid, published an approach paper on comprehensive legislation for securities market. In the Budget Speech for the year 1990-91, the then Finance Minister stated: "The previous Government had announced the formation of the Securities and Exchange Board of India (SEBI) in 1988. Three years have passed and the legislation for giving statutory authority to SEBI has not been introduced. We will ensure that this is done in this budget session".

In the Budget Speech for 1991-92, the Finance Minister said: "While presenting the budget for 1987-80, our former Prime Minister the late Shri Rajiv Gandhi had assured this House that for a healthy growth of capital markets, for protecting the rights of investors and for preventing trading malpractices the Government would set up a separate Board for the regulation and orderly functioning of the stock exchanges and the securities industry. Although the Board was set up, legislation to give the Board adequate powers was unfortunately not enacted. This shall now be done forthwith and full statutory powers will be given to the Securities and Exchange Board of India for administering the relevant provisions of the Securities contracts (Regulation) Act and the Companies Act. Transferring these powers from the Controller of Capital Issues and the Government to an independent body would enable it to effectively regulate, promote and monitor the working of the stock exchanges in the country. A comprehensive package of reforms relating to trading on the stock exchange, including a system of national clearing and settlement and setting up of a central depository, is also under active consideration".

Finally, in the budget Speech for 1992-93, the Finance Minister said: "Financial sector reform also includes reform of the capital market, which will increasingly play a vital role in mobilizing and allocating resources from the public. Several initiatives announced in my budget speech last year have since been implemented. The Securities and Exchange Board of India (SEBI), has now been established on a statutory basis. As we gain experience, additional powers will be given to SEBI to strengthen its capability." The SEBI was given a statutory status on 30th January, 1992 by an Ordinance to provide for the establishment of SEBI. A Bill to replace the Ordinance was introduced in Parliament on 3rd March, 1992 and was passed by both houses of Parliament on 1st April, 1992. The Bill became an Act on 4th April 1992 the date on which it

received the Presidents assent. However, as provided for in section (3), this Act is to be deemed to have come into force on 30th January, 1992, i.e., the date on which the SEBI Ordinance was promulgated.

7.4 FUNCTIONS OF SEBI

- SEBI is primarily set up to protect the interests of investors in the securities market.
- It promotes the development of the securities market and regulates the business.
- SEBI provides a platform for stockbrokers, sub-brokers, portfolio managers, investment advisers, share transfer agents, bankers, merchant bankers, trustees of trust deeds, registrars, underwriters, and other associated people to register and regulate work.
- It regulates the operations of depositories, participants, custodians of securities, foreign portfolio investors, and credit rating agencies.
- It prohibits inner trades in securities, i.e. fraudulent and unfair trade practices related to the securities market.
- It ensures that investors are educated on the intermediaries of securities markets.
- It monitors substantial acquisitions of shares and take-over of companies.
- SEBI takes care of research and development to ensure the securities market is efficient at all times.

7.5 ORGANISATION OF SEBI

SEBI has a corporate framework comprising of various departments each managed by a department head. There are about 20+ departments under SEBI. Some of these departments are corporation finance, economic and policy analysis, debt and hybrid securities, enforcement, human resources, investment management, commodity derivatives market regulation, legal affairs, and more.

The hierarchical structure of SEBI consists of the following members:

- The chairman of SEBI is nominated by the Union Government of India.
- Two officers from the Union Finance Ministry will be a part of this structure.
- One member will be appointed from the Reserve Bank of India.
- Five other members will be nominated by the Union Government of India.

7.6 ACTIVITIES OF SEBI

The primary significant action embraced by SEBI was the readiness of an Approach paper on far reaching enactment for Securities markets. Since commencement, SEBI has given various rules, rules, draft guidelines, consultative

papers, and so on, so as to control and build up the protections advertise and ensure financial specialists intrigue. Some significant rules, and so on gave by SEBI include:

Principles viewing enrollment of mediators, for example, share move specialists, investors to the issue, debenture trustees to the trust deeds, recorders to an issue, financiers, portfolio administrators and venture guides, stock agents and sub-dealers related with the protections advertise. Rules for trader financiers expressing approved exercises of dealer investors, the authorization criteria and the terms of authorization. Set of accepted rules for trader financiers, the infringement, deliberate or something else, of which will make the shipper investor blameworthy of unfortunate behaviour or amateurish lead. Order of shipper financiers, can be arranged into three classifications. Category 1 merchant bankers are authorized to act in the capacity of lead manager/co-manager/advisor or consultant to an issue, portfolio manager and underwriter to an issue as mandatory required. Category 11 merchant bankers are authorized to act in the capacity of co-manager/advisor or consultant to an issue or portfolio manager. Category III merchant bankers are authorized to act only in the capacity of advisor or consultant to an issue.

Guidelines on portfolio management services which cover such aspects as portfolio management activities, client relationship, investment tenure fees to be paid to the portfolio manager, client's money account, investment of client fund, periodical reports to clients and administrative powers of the SEBI in this regard. Guidelines for lead managers for interest allocation of responsibilities which require that wherever there is more than one lead manager to the issue inter se allocation of the pre-issue and post-issue activities/sub-activities will be properly made and information in this regard sent to SEBI.

Guidelines regarding purchase of non-convertible part of debentures (khokhas) from the subscribers Regulation for registrars and share transfer agents Regulation on insider trading Guidelines for mutual funds and asset management companies Draft regulation for substantial acquisition of shares in listed companies Consultative paper on free market pricing of capital issue Guidelines on capital issues/Guidelines for Disclosure and Investor Protection along with clarifications from time to time. Guidelines on issue of securities by Development Financial Institutions Formation of two advisory committees, one on primary market and the other on secondary market comprising members from profession, academic and investing public. SEBI has brought out some Acts, Regulations and Guidelines during the last one decade covering various activities relating to securities market and intermediaries connected with securities market.

- Depositories Act, 1996
- SEBI (Depositories and Participants) Regulations, 1996.
- SEBI (Bankers to an Issue) Regulations, 1994
- SEBI (Custodian of Securities) Regulations, 1996
- SEBI (Debenture Trustees) Regulations, 1993.
- SEBI (Foreign Institutional investors) Regulations, 1995.

- SEBI (Prohibition of Insider Trading) Regulation, 1992.
- SEBI (Merchant Bankers) Regulations, 1992.
- SEBI (Mutual Funds) Regulations, 1996.
- SEBI (Portfolio Managers) Regulations, 1993.
- SEBI (Registrars to an Issue and Share Transfer) Regulations, 1993.
- SEBI (Stock Brokers and sub Brokers) Regulations, 1992.
- SEBI (Substantial Acquisition and Takeover) Regulations, 1997.
- SEBI (Buy-back of Securities) Regulations, 1998
- SEBI (Underwriters) Regulations, 1993.
- SEBI (Venture Capital Funds) Regulations, 1992.
- SEBI (Central Listing Authority) Regulations, 2003
- SEBI (Infrastructure Investment Trusts) Regulations, 2014
- SEBI (Share Based Employee Benefits) Regulations, 2014
- SEBI (Prohibition of Insider Trading) Regulations, 2015
- SEBI (Buy-back of Securities) Regulations 2018
- Securities and Exchange Board of India (Foreign Portfolio Investors) Regulations, 2019

7.7 SELF REGULATION

India has recently made significant strides in creating a self-regulatory system as part of its developing financial marketplace. At a board meeting of the Securities and Exchange Board of India (SEBI) in August 2012, it approved a proposal to establish an SRO for the mutual fund distribution business. SEBI proposed amended regulations in early January 2013 that effectively launched India's first official self-regulatory body in the financial services area.

The securities market landscape has changed dramatically since CFA Institute published "Self-Regulation in Today's Securities Markets: Outdated System or Work in Progress?" in 2007. The financial crisis of 2008–2009 raised unprecedented concerns and considerations for the future of the financial markets. These concerns range from the governance and oversight of individual financial firms and individual market participants to the health of national regulatory systems and to the global nature of the intricately interconnected market system. Therefore, whereas the 2007 paper focused on the type of self-regulatory structure that is most effective, any discussion of self-regulation for the future must be greatly expanded. No longer is addressing the regulatory needs of a single country useful without considering the effect on a broader scale. Nor is any discussion complete without factoring in the effect of increasingly complex products and practices on the ability of governmental regulators to regulate. Self-regulation took much of the blame for the financial crisis that hit bottom in late 2008. Indeed, a number of entities showed they were incapable of self-discipline; they ranged from the large, systemically important banks that engaged in a massive

leveraging of the financial system to the creditors who funded these institutions. Unfortunately, financial regulation in the 1990s and early 2000s had handed the determination of required regulatory capital to the very financial institutions subject to the rules. Some statutory regulators also applied what was known as “light-touch” regulation, which relied largely on the integrity and self-discipline of the firms being regulated. The results were disappointing, at best, and disastrous, at worst. It is in this environment of fundamental questions about the ability of markets and firms to regulate themselves that this report reconsiders self-regulation. In doing so, we identify the means by which regions and nations are applying and adapting self-regulation, discuss the benefits and weaknesses of the approaches, and consider how some approaches give new life to this centuries old regulatory tool.

7.7.1 ROLE OF SELF REGULATORY ORGANISATION

An SRO for a segment of intermediaries in the securities market would be entrusted with the role of being the first level regulator for such intermediaries, who are its members. The SRO would perform several crucial roles including the following:

(a) Developmental Role

- Providing Training and Education to its members
- Creating Investor awareness
- Proving policy inputs inter alia by participating in SEBI committees

(b) Regulatory Role

- Granting of membership in SRO/ Recommending to SEBI for grant of certificate of registration / renewal of certificate of registration of its members.
- Setting down a Code of Conduct and conducting examination for certification / admission of members
- Supervision and Inspection (offsite and onsite) of its members.

(c) Grievance Redressal & Dispute Resolution Role

- Resolution of grievances against the members
- Resolution of disputes between an investor and member
- Resolution of disputes between members

(d) Disciplinary Role

- Taking action in the event of violation of code of conduct
- Taking action in the event of violation of regulations

7.7.2 ELIGIBILITY CRITERIA TO BECOME SRO

While SRO is required to have adequate experience (direct or indirect) in regulation, supervision, dispute resolution and investor protection, the SRO Regulations provide certain eligibility criteria which, inter alia, include the following:

- Incorporation under Section 8 of Companies Act, 2013
- MoA has discharging the functions of SRO as one of its main objects
- Minimum net worth of one crore rupees
- Adequate infrastructure
- Professional competence, financial soundness and general reputation of fairness and integrity

7.8 SUMMARY

In this Unit, we have talked about the lawful and administrative structures pertinent to the protections advertise in India like essential market, auxiliary market and over the counter trade of India. We have seen that while there are hosts of Acts which influence and manage the protections showcase in India, the two most significant were Securities Contract (Regulation) Act, 1956 and set of Regulations and Guidelines given by Security Exchange Board of India. In 1992, the Securities and Exchange Board of India Act, 1992 was passed to make Securities and Exchange Board of India as a statutory body to go about as a nodal administrative body for the guideline and improvement of protections advertise in India and ensure and advance financial specialists intrigue. This unit has additionally examined the origin, functions, organization and activities of SEBI at some length. Subsequent to talking about the present status of guidelines administering protections advertises in India, this unit has likewise featured the job of self-guideline versus administrative guideline.

7.9 SELF-ASSESSMENT QUESTION

1. Effective regulation is an essential part for growth of securities market' Discuss.
2. What is essential eligibility to make a Member of a Stock Exchange in India?
3. Discuss the purpose and functions of Securities and Exchange Board of India.
4. Write a short note on the history of regulation of securities market in India.
5. SEBI is an independent Board.' Do you agree? Why?
6. Write a short note on self-regulation.

7. What measures have been adopted in India to protect investor's interest in the security market?
8. In a short span of its existence, SEBI has been able to fully meet its objectives. Critically comment.

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- Financial Service Authority, UK: www.fsa.gov.uk
- SEBI, India: www.sebi.gov.in



॥ सरस्वती नः सुभगा मयस्करत् ॥

Uttar Pradesh Rajarshi Tandon
Open University

M.Com-403

Security Analysis and Portfolio Management

BLOCK

3

UNIT-8

Economy and Industry Analysis

UNIT-9

Company Level Analysis

UNIT-10

Technicle Analysis

UNIT-11

Efficient Market Hypothesis

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BLOCK INTRODUCTION

In **Block 3** you have learnt about the security analysis and portfolio management; economy and industry analyses, company level analysis, technical analysis, and efficient market hypothesis.

Unit 8 discusses about economy and industry analyses; security analysis and investment decision, fundamental analysis, fundamental analysis and efficient market, fundamental analysis and chemistry of earnings, economy industry, company analyses: a framework economy analysis economic forecasting, anticipatory surveys, barometric or indicator approach, econometric model building approach, industry analysis, and techniques of industry analysis.

Unit 9 explains company level analysis; estimation of future price, quantitative analysis, dividend discounted method, price earnings approach, forecasting earnings per share, traditional methods of forecasting, EPS trend analysis, ROI approach, market share approach, independent estimates approach, modern methods of forecasting, EPS regressing and correlation analysis, trend analysis, decision tree analysis, and the qualitative analysis.

Unit 10 deals with technical analysis; meaning of technical analysis, fundamental analysis vs. technical analysis, origin and development of technical analysis, Dow theory and its basic tenets, classical technical analysis, modern technical analysis, techniques of technical analysis, and the market indicators limitations of technical analysis.

Unit 11 deals with efficient market hypothesis; definitions of market efficiency, forms of market efficiency, empirical tests of EMH, tests of weak form, tests of semi strong form, tests of strong form, anomalies in EMH, Indian studies on market efficiency, implications of EMH for security analysis, and the implications of EMH for portfolio management.

UNIT-8 ECONOMY AND INDUSTRY ANALYSIS

UNIT FRAMEWORK

- 8.1 Purpose
- 8.2 Security Analysis and Investment Decision
- 8.3 Fundamental Analysis
- 8.4 Fundamental Analysis and Efficient Market
- 8.5 Fundamental Analysis and Chemistry of Earnings
- 8.6 Economy-Industry-Company Analyses: A Framework
- 8.7 Economy Analysis
- 8.8 Economic Forecasting
 - 8.8.1 Anticipatory Surveys
 - 8.8.2 Barometric or Indicator Approach
 - 8.8.3 Econometric Model Building Approach
- 8.9 Industry Analysis
 - 8.9.1 Techniques of Industry Analysis
- 8.10 Summary
- 8.11 Self-Assessment Question
- 8.12 Text and References

8.1 PURPOSE

The objectives of this unit are:

- To discuss the security analysis and investment decision,
- To explain the fundamental analysis and earning chemistry with efficient market hypothesis,
- To discuss the company analysis and it's various factors,
- To explain economic analysis and economic forecasting with its indicators,
- To discuss the industry analysis and its techniques.

8.2 SECURITY ANALYSIS AND INVESTMENT DECISION

Security analysis is the basis for rational investment decisions. If a security's estimated value is above its market price, the security analyst will recommend buying the stock. If the estimated value is below the market price, the security should be sold before its price drops. However, the values of the securities are continuously changing as news about the securities becomes known. Traditional investment analysis, when applied to securities, emphasizes the projection of prices and dividends. That is, the potential price of a firm's common stock and the future dividend stream are forecasted, and then discounted back to the present. This intrinsic value is then compared with the security's current market price. If the current market price is below the intrinsic value, a purchase is recommended, and if vice versa is the case sale is recommended. Although modern security analysis is deeply rooted in the fundamental concepts just outlined, the emphasis has shifted. The more modern approach to common stock analysis emphasizes return and risk estimates rather than mere price and dividend estimates.

Characteristics of Investment

The characteristics of investment can be understood in terms of followings:

- Return,
- Risk,
- Safety,
- Liquidity etc.

Return: All investments are characterized by the expectation of a return. In fact, investments are made with the primary objective of deriving return. The expectation of a return may be from income (yield) as well as through capital appreciation. Capital appreciation is the difference between the sale price and the purchase price. The expectation of return from an investment depends upon the nature of investment, maturity period, and market demand and so on.

Risk: Risk is inherent in any investment. Risk may relate to loss of capital, delay in repayment of capital, nonpayment of return or variability of returns. The risk of an investment is determined by the investments, maturity period, repayment capacity, nature of return commitment and so on. Risk and expected return of an investment are related. Theoretically, the higher the risk, higher is the expected returned. The higher return is a compensation expected by investors for their willingness to bear the higher risk.

Safety: The safety of investment is identified with the certainty of return of capital without loss of time or money. Safety is another feature that an investor desires from investments. Every investor expects to get back the initial capital on maturity without loss and without delay.

Liquidity: An investment that is easily saleable without loss of money or time is said to be liquid. A well-developed secondary market for security increases the liquidity of the investment. An investor tends to prefer maximization of expected return, minimization of risk, safety of funds and liquidity of investment.

8.3 FUNDAMENTAL ANALYSIS

The search for the security pricing involves the use of fundamental analysis. Under fundamental analysis, the security analysts studies the fundamental facts affecting a stock's values, such as company's earnings, their management, the economic outlook, the firm's competition, market conditions etc.

Fundamental analysis is primarily concerned with determining the intrinsic value or the true value of a security. For determining the security's intrinsic value the details of all major factors (GNP, industry sales, firm sales and expense etc.) is collected or an estimates of earnings per share may be multiplied by a justified or normal prices earnings ratio.

After making this determination, the intrinsic value is compared with the security's current market price. If the market price is substantially greater than the intrinsic value the security is said to be overpriced. If the market price is substantially less than the intrinsic value, the security is said to be underpriced. However, fundamental analysis comprises:

1. Economic Analysis
2. Industry Analysis
3. Company Analysis

8.4 FUNDAMENTAL ANALYSIS AND EFFICIENT MARKET

Efficient market hypothesis is an idea partly developed in the 1960s by Eugene Fame. It states that it is impossible to beat the market because prices already incorporate and reflect all relevant information. This is also a highly controversial and often disputed theory. Supporters of this model believe it is pointless to search for undervalued stocks or try to predict trends in the market through fundamental analysis or technical analysis. Under the efficient market hypothesis, any time you buy and sell securities, you're engaging in a game of chance, not skill. If markets are efficient and current, it means that prices always reflect all information, so there are no way you'll ever be able to buy a stock at a bargain price. This theory has been met with a lot of opposition, especially from the technical analysts. Their argument against the efficient market theory is that many investors base their expectations on past prices, past earnings, track records and other indicators. Because stock prices are largely based on investor expectation, many believe it only makes sense to believe that past prices influence future prices.

The weak form of EMH says that you cannot predict future stock prices on the basis of past stock prices. Weak-form EMH is a shot aimed directly at

technical analysis. If past stock prices don't help to predict future prices, there's no point in looking at them—no point in trying to discern patterns in stock charts. This weak form of the efficient market hypothesis is popularly known as the random-walk theory. Clearly, if this weak form of the efficient market hypothesis is true, it is a direct repudiation of technical analysis. If there is no value in studying past prices and past price changes, there is no value in technical analysis. As we saw in the preceding chapter, however, technicians place considerable reliance on the charts of historical prices that they maintain even though the efficient-market hypothesis refutes this practice while Fundamental analysis is primarily concerned with determining the intrinsic value or the true value of a security. For determining the security's intrinsic value the details of all major factors like GNP, industry sales, firm sales and expense etc. is collected or an estimates of earnings per share may be multiplied by a justified or normal prices earnings ratio.

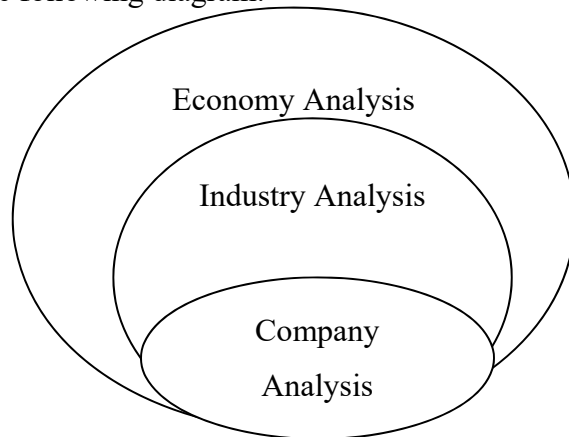
8.5 FUNDAMENTAL ANALYSIS AND CHEMISTRY OF EARNINGS

Under fundamental analysis, the security analysts studies the fundamental facts affecting a stock's values, such as company's earnings, their management, the economic outlook, the firm's competition, market conditions etc. Fundamental analysis is basically concerned with determining the intrinsic value or the true value of a security. Fundamental analysis is a method of evaluating a security in an attempt to assess its intrinsic value, by examining related economic, financial, and other qualitative and quantitative factors. Fundamental analysts study anything that can affect the security's value, including macroeconomic factors (e.g. economy and industry conditions) and microeconomic factors (e.g. financial conditions and company management). The end goal of fundamental analysis is to produce a quantitative value that an investor can compare with a security's current price, thus indicating whether the security is undervalued or overvalued. Under chemistry of earning it typically refer to after-tax net income, sometimes known as the [bottom line](#), or a company's profits. Earnings are the main determinant of a company's share price, because earnings and the circumstances relating to them can indicate whether the business will be profitable and successful in the long run. Earnings are perhaps the single most important and most studied number in a company's [financial statements](#), because they show profitability compared with [analyst](#) estimates and company guidance. They can also be used to compare a company's performance over time and relative with its competitors and industry peers. Companies typically report earnings on both a quarterly and annual basis, and earnings reported that deviate from analysts' expectations can have large impacts on stock price.

8.6 ECONOMIC-INDUSTRY-COMPANY ANALYSIS: A FRAMEWORK

Fundamental analysis is the method of analyzing companies based on factors that affect their intrinsic value. There are two sides to this method: the

quantitative and the qualitative. The quantitative side involves looking at factors that can be measured numerically, such as the company's assets, liabilities, cash flow, revenue and price to- earnings ratio. The limitation of quantitative analysis, however, is that it does not capture the company's aspects or risks immeasurable by a number - things like the value of an executive or the risks a company faces with legal issues. The analysis of these things is the other side of fundamental analysis: the qualitative side. Although relatively more difficult to analyze, the qualitative factors are an important part of a company. Since they are not measured by a number, they more represent an either negative or positive force affecting the company. But some of these qualitative factors will have more of an effect, and determining the extent of these effects is what is so challenging. To start, identify a set of qualitative factors and then decide which of these factors add value to the company, and which of these factors decrease value. Then determine their relative importance. The qualities one analyzes can be categorized as having a positive effect, negative effect or minimal effect. The best way to incorporate qualitative analysis into evaluation of a company is to do it once you have done the quantitative analysis. The conclusion come to on the qualitative side can put quantitative analysis into better perspective. If when looking at the company numbers one saw good reason to buy/invest in the company, but then found many negative qualities, he may want to think twice about buying/investing. Negative qualities might include potential litigations, poor R and D prospects or a board full of insiders. The conclusions of qualitative analysis either reconfirm or raise questions about the conclusions of quantitative analysis. In this segment it focuses on economic industry and company level analysis. It can be shown by the following diagram:



Fundamental analysis is not as simple as looking at numbers and computing ratios; it is also important to look at influences and qualities that do not have a number value. The present and future values are affected by the following factors:

8.6.1 COMPETITIVE EDGE

Many industries in India are composed of hundreds of individuals companies. The large companies are successful in meeting the competition and some companies rise to the position of eminence and dominance. The companies who have obtain the leadership position; have proven his ability to withstand

competition and to have a sizable share in the market. The competitiveness of the company can be studied with the help of:

8.6.1.1 MARKET SHARE

The market share of the company helps to determine a company's relative position within the industry. If the market share is high, the company would be able to meet the competition successfully. The size of the company should also be considered while analyzing the market share, because the smaller companies may find it difficult to survive in the future.

8.6.1.2 GROWTH OF ANNUAL SALES

Investor generally prefers to study the growth in sales because the larger size companies may be able to withstand the business cycle rather than the company of smaller size. The rapid growth keeps the investor in better position as growth in sales is followed by growth in profit. The growth in sales of the company is analyzed both in rupee terms and in physical terms.

8.6.1.3 STABILITY OF ANNUAL SALES

If a firm has stable sales revenue, other things being remaining constant, will have more stable earnings. Wide variation in sales leads to variation in capacity utilization, financial planning and dividends. This affects the company's position and investor's decision to invest.

8.6.2 EARNINGS

The earning of the company should also be analyzed along with the sales level. The income of the company is generated through the operating (in service industry like banks- interest on loans and investment) and non-operating income (ant company, rentals from lease, dividends from securities). The investor should analyze the sources of income properly.

8.6.3 CAPITAL STRUCTURE

Capital structure is combination of owned capital and debt capital which enables to maximize the value of the firm. Under this, we determine the proportion in which the capital should be raised from the different securities. The capital structure decisions are related with the mutual proportion of the long term sources of capital.

8.6.4 MANAGEMENT

The basic objective of the company is to attain the stated objectives of the company for the good of the equity holders, the public and employees. If the objectives of the company are achieved, investor will have a profit. Good management results in high profit to investors. Management is responsible for

planning, organizing, actuating and controlling the activities of the company. The good management depends upon the qualities of the manager.

8.6.5 OPERATING EFFICIENCY

The operating efficiency of the company directly affects the earnings capacity of a company. An expanding company that maintains high operating efficiency with a low break-even point earns more than the company with high break-even point. If a firm has stable operating ratio, the revenues also would be stable. Efficient use of fixed assets with raw materials, labour and management would lead to more income from sales. This leads to internal fund generation for the expansion of the firm.

8.6.6 FINANCIAL PERFORMANCE

8.6.6.1 BALANCE SHEET

The level, trends, and stability of earnings are powerful forces in the determination of security prices. Balance sheet shows the assets, liabilities and owner's equity in a company. It is the analyst's primary source of information on the financial strength of a company. Accounting principles dictate the basis for assigning values to assets. Liability values are set by contracts. When assets are reduced by liabilities, the book value of shareholder's equity can be ascertained.

The book value differs from current value in the market place, since market value is dependent upon the earnings power of assets and not their cost of values in the accounts.

8.6.6.2 PROFIT AND LOSS ACCOUNT

It is also called as income statement. It expresses the results of financial operations during an accounting year i.e. with the help of this statement we can find out how much profit or loss has taken place from the operation of the business during a period of time. It also helps to ascertain how the changes in the owner's interest in a given period have taken place due to business operations. Last of all, for analyzing the financial position of any company following factors need to be considered for evaluating present situation and prospects of company. The questions that need to be answered for company analysis are:

8.6.7 AVAILABILITY AND COST OF INPUTS

Is the company well placed with respect to the availability of basic raw materials, power, fuel and other production inputs? What are the costs advantages/disadvantages of the company vis-à-vis its competitors?

8.6.8 ORDER POSITION

What is the order position of the company? How many months or years of production does it represent? Is the order position improving or deteriorating?

8.6.9 REGULATORY FRAMEWORK

What is the licensing policy applicable to the industry to which the firm belongs? Are there any price and/or distribution controls applicable to the company? If so, what are their implications for profitability?

8.6.10 TECHNOLOGICAL AND PRODUCTION CAPABILITIES

What is the technological competence of the firm? What is the state of its plant and machinery? Does the company have unutilized capacity to exploit favourable market developments?

8.6.11 MARKETING AND DISTRIBUTION

- What is the image of the company in the marketplace?
- How strong is the loyalty of its customers/clients?
- What is the reach of the distribution network?

8.6.12 FINANCE AND ACCOUNTING

What are the internal accruals? How much access the companies have to external financing? What are the products in the portfolio of the company? How competitive is the position of the company in these products?

8.6.13 HUMAN RESOURCE AND PERSONNEL

How competent and skilled is the workplace of the company? Is the company over-staffed or under-staffed? What is the extent of employee turnover?

8.7 ECONOMIC ANALYSIS

Return assumptions for the stock and bond markets and sales, cost, and profit projections for industries and nearly all companies necessarily embody economic assumptions. Investors are concerned with those forces in the economy which affect the performance of organization in which they wish to participate, through purchase of stock. By identifying key assumptions and variables, we can monitor the economy and gauge the implications of new information on our economic outlook and industry analysis. In order to beat the market on a risk adjusted basis, the investor must have forecasts that differ from the market consensus and must be correct more often than not. Economic trends can take two basic forms: cyclical changes that arise from ups and downs of the business cycle, and structural changes that occur when the economy is undergoing a major change in how it functions.

For the security analyst or investor, the anticipated economic environment, and therefore the economic forecast, is important for making decisions concerning both the timings of an investment and the relative investment desirability among the various industries in the economy. The key for the analyst is that overall economic activities manifest itself in the behaviour of the stocks in general. That is, the success of the economy will ultimately include the success of the overall market. Some of the broad forces which impact the economy are:

8.7.1 SAVINGS AND INVESTMENT

Growth of an economy requires proper amount of investments which in turn is dependent upon amount of domestic savings. The amount of savings is favorably related to investment in a country. The level of investment in the economy and the proportion of investment in capital market is major area of concern for investment analysts. The level of investment in the economy is equal to: Domestic savings + inflow of foreign capital - investment made abroad. Stock market is an important channel to mobilize savings, from the individuals who have excess of it, to the individual or corporate, who have deficit of it. Savings are distributed over various assets like equity shares, bonds, small savings schemes, bank deposits, mutual fund units, real estates, bullion etc. The demand for corporate securities has an important bearing on stock prices movements. Greater the allocation of equity in investment, favorable impact it have on stock prices.

8.7.2 AGRICULTURE AND MONSOONS

Agriculture is directly and indirectly linked with the industries. Hence increase or decrease in agricultural production has a significant impact on the industrial production and corporate performance. Companies using agricultural raw materials as inputs or supplying inputs to agriculture are directly affected by change in agriculture production. For example- Sugar, Cotton, Textile and Food processing industries depend upon agriculture for raw material. Fertilizer and insecticides industries are supplying inputs to agriculture. A good monsoon leads to higher demand for inputs and results in bumper crops. This would lead to buoyancy in stock market. If the monsoon is bad, agriculture production suffers and cast a shadow on the share market.

8.7.3 INTEREST RATES

Banks usually benefit from volatile interest rates because stable interest rates lead to heavy competitive pressures that squeeze their interest margins. High interest rates clearly harm the housing and the construction industry. Interest rates vary with maturity, default risk, inflation rate, productivity of capital etc. The interest rate on money market instruments like Treasury Bills are low, long dated government securities carry slightly higher interest rate and interest rate on corporate debenture is still higher. With the deregulation interest rates are softened, which were quite high in regulated environment. Interest rate affects the cost of financing to the firms. A decrease in interest rate implies lower cost of finance for firms and more profitability and it finally leads to decline in discount rate applied by the equity investors, both of which have a favourable impact on

stock prices. At lower interest rates, more money at cheap cost is available to the persons who do business with borrowed money, this leads to speculation and rise in price of share.

8.7.4 GOVERNMENT BUDGET AND DEFICIT

Government plays an important role in the growth of any economy. The government prepares a central budget which provides complete information on revenue, expenditure and deficit of the government for a given period. Government revenue come from various direct and indirect taxes and government made expenditure on various developmental activities. The excess of expenditure over revenue leads to budget deficit. For financing the deficit the government goes for external and internal borrowings. Thus, the deficit budget may lead to high rate of inflation and adversely affects the cost of production and surplus budget may results in deflation. Hence, balanced budget is highly favourable to the stock market.

8.7.5 THE TAX STRUCTURE

The business community eagerly awaits the government announcements regarding the tax policy in March every year. The type of tax exemption has impact on the profitability of the industries. Concession and incentives given to certain industry encourages investment in that industry and have favorable impact on stock market.

8.7.6 INFRASTRUCTURAL FACILITIES AND ARRANGEMENTS

Infrastructure facilities and arrangements play an important role in growth of industry and agriculture sector. A wide network of communication system, regular supply or power, a well-developed transportation system (railways, transportation, road network, inland waterways, port facilities, air links and telecommunication system) boost the industrial production and improves the growth of the economy. Banking and financial sector should be sound enough to provide adequate support to industry and agriculture. The government has liberalized its policy regarding the communication, transport and power sector for foreign investment. Thus, good infrastructure facilities affect the stock market favourable.

8.7.7 SENTIMENTS

The sentiments of consumers and business can have an important bearing on economic performance. Higher consumer confidence leads to higher expenditure and higher business confidence leads to greater business investments. All this ultimately leads to economic growth. Thus, sentiments influence consumption and investment decisions and have a bearing on the aggregate demand for goods and services.

8.7.8 POPULATION

Population gives an idea of the kind of labour force in a country. Increasing population gives demand for more industries like hotels, residences, service industries like health, consumer demand like refrigerators and cars. Increasing population therefore shows a greater need for economic development although it does not show the exact industry that will expand.

8.7.9 RESEARCH AND TECHNOLOGICAL DEVELOPMENT

The economic forces relating to investments would depend on the amount of resources spent by the government on the particular technological development affecting the future. Investors would prefer to invest in those industries in which the larger share of development funds are being allocated by the government. For example in India oil and information technology are receiving a greater amount of attention and may be considered for investment.

8.7.10 MACROECONOMIC STABILITY

General macroeconomic conditions are very important in terms of the general climate under which investment decisions are made. So economic growth will depend to some extent upon the stability of the economy e.g. fiscal balance, and reasonably predictable levels of inflation. Macroeconomic stability reduces the risks of investment and might therefore be seen as a necessary condition for growth. Fiscal balance ensures that there is less risk of inflation, because there will be less risk of governments printing money. This may also stabilize the exchange rate and allow interest rates to be set at a reasonably low level - so further encouraging investment.

8.7.11 TRADE LIBERALIZATION, CAPITAL MOBILITY AND EXCHANGE RATE POLICY

The abolition of trade restrictions (tariffs and quotas) is often seen as a necessary condition for growth. The idea is to widen markets and thus allow economies of scale in exporting industries. It is often argued that exchange rates need to be adjusted downwards at the same time, to ensure that potential exporters can compete on world markets. To encourage direct foreign investment restrictions on international capital flows may need to be reduced.

8.7.12 NATURAL RESOURCES AND RAW MATERIAL

The natural resources are largely responsible for a country's economic development and overall improvement in the condition of corporate growth. The discovery of oil in Middle Eastern countries and the discovery of gas in America have significantly changed the economic and investment pattern of the countries.

8.7.13 GROSS DOMESTIC PRODUCT (GDP)

GDP measures the total output of goods and services for final use occurring within the domestic territory of a given country, regardless of the allocation to domestic and foreign claims. Gross domestic product at purchaser values (market prices) is the sum of gross value added by all resident and nonresident producers in the economy plus any taxes and minus any subsidies not included in the value of the products. Higher GDP level is an indication of higher economic development and thereby higher investment ability.

8.7.14 INTERNATIONAL TRADE

Exports and Imports of goods and services represent the value of all goods and other market services provided to or received from the rest of the world. They include the value of merchandise, freight, insurance, transport, travel, royalties, license fees, and other services, such as communication, construction, financial, information, business, personal, and government services. They exclude labor and property income (formerly called factor services) as well as transfer payments. Higher levels of international trade especially higher exports are indicative of higher earnings and therefore higher economic development of a country.

8.7.15 INFLATION

Higher inflation is generally negative for the stock market because it causes higher interest rates, it increases uncertainty about future prices and costs, and it harms firms that cannot pass their cost increases on to consumers. Some industries may benefit inflation. Natural resource industries benefit if their production costs do not rise with inflation, because their output will likely sell at higher price.

8.7.16 OTHER FACTOR

Besides the factors discussed above there are other significant economic indicators such as country's fiscal policy, monetary policy, stock prices, state of capital market, labour productivity, consumer activity etc.

8.8 ECONOMIC FORECASTING

These are basic economic forecasting techniques:

8.8.1 ANTICIPATORY SURVEYS

Under this prominent people in government and industry are asked about their plans with respect to construction, plant and equipment expenditure, inventory adjustments and the consumers about their future spending plans. To the extent that these people plan and budget for expenditure in advance and adhere to their intentions, surveys of intentions constitute a valuable input in forecasting process. It is necessary that surveys of intentions be based on elaborate statistical sampling procedures, the greatest short coming of intentions, surveys is that the forecaster has no guarantee that the intention will be carried

out. External shocks, such as strikes, political turmoil or government action can cause changes in intentions.

8.8.2 BAROMETRIC OR INDICATOR APPROACH

Barometric technique is based on the presumption that relationship can exist among various economic time series. It gives indication of the economic process through cyclical timings. These projections are a method of getting indications of the future relating to business depressions and business prosperity. This method although has its advantages of giving the future indications of the economy is not an exact method of finding out the economic activity. It gives results approximately and is at best an estimation of the future of the economic conditions. For example, industrial production overtime and industrial loans by commercial banks over time may move in same direction. Historical data are examined in order to ascertain which economic variables have led, lagged after of moved together with the economy. A leading indicator may be leading because it measures something that overshadows a change in production activity. There are three kinds of relationships among economic time series:

8.8.2.1 LEADING SERIES

Leading series consists of the data that move ahead of the series being compared. For example applications for the amount of housing loan over time is a leading series for the demand of construction material, birth rate of children is the leading series for demand of seats in schools etc. In other words, leading indicators are those time series data that historically reach their high points (peaks) or their low points (troughs) in advance of total economic activity.

8.8.2.2 COINCIDENT SERIES

When data in series moves up and down along with some other series, it is known as coincident series. A series of data on national income is often coincident with the series of employment in an economy (over a short-period). In other words, coincident indicators reach their peaks or trough at approximately the same time as the economy.

8.8.2.3 LAGGING SERIES

Where data moves up and down behind the series being compared, example, and data on industrial wages over time is a lagging series when compared with series of price index for industrial workers. They reach their turning points after the economy has already reached its own. These following may be component of current composite indexes are as:

Composite Index of Leading Indicators

- Average weekly hours of manufacturing/production workers.
- Average weekly initial unemployment claims.
- Manufacturer's new orders for consumer goods and material industries.

- Contracts and orders for plant and equipment.
- Number of new building permits issued.
- Index of S&P 500 stock prices/Index of BSE sensitive stock prices.
- Money supply.
- Change in sensitive material prices.
- Change in manufacturers' unfilled orders, durable goods industries.
- Index of consumer expectations.

Composite Index of Coincident Indicators

- Employees on nonagricultural payrolls.
- Personal Income less transfer payments.
- Index of industrial production.
- Manufacturing and trade sales.

Composite Index of Lagging Indicators

- Average duration of unemployment.
- Ratio of manufacturing and trade inventories to sales.
- Average prime rate.
- Commercial and industrial loans outstanding.
- Ratio of consumer installment credit outstanding to personal income.
- Change in Index of labour cost per unit of manufacturing output.
- Change in consumer price index for services.

8.8.3 ECONOMETRIC MODEL BUILDING

The econometric methods combine statistical tools with economic theories to estimate economic variables and to forecast the intended economic variables. The forecast made through econometric method are much more reliable than those made through any other method. For applying econometric technique, the user is to specify in a formal mathematical manner the precise relation between the dependent and independent variable. In using econometrics, the forecaster must quantify precisely the relationships and assumptions he is making. This not only gives him direction but also the magnitudes. An econometric model may be a single-equation regression model or it may consist of a system of simultaneous equations. Single equation regression serves the purpose of forecasting in many cases. But where the relationship between economic variables are complex and variable are so interrelated that unless one is determined, the other cannot be determined, a single-equation regression model does not serve the purpose. In that

case, a system of simultaneous equations is used to estimate and forecast the target variable.

8.9 INDUSTRY ANALYSIS

Once economic Analysis is made and the forecast of economy is known the analyst needs to look at the industry groups which are promising in the coming years and then choose the companies to invest in within those industry groups. There is no necessary co relation between economic growth and industry growth some industries may grow in spite of poor economic growth. The industry has been defined as a homogeneous group of people doing a similar kind of activity or similar work. But industry broadly covers all the economic activity happening in a country to bring growth. A broad concept of industry would include all the factors of production, transportation, trading activity and public utilities. The broad classification of industry, however, would not be relevant for an investor who would like to ensure that he does not lose from the investment that he makes. It is, therefore, essential to qualify the industry into some characteristics homogeneous group. Usually, the industry is classified in processes and in stages. It may also be classified according to work group that it identifies to. The mediocre firm in the growth industry usually out performs the best stocks in a stagnant industry. Therefore, it is worthwhile for a security analyst to pinpoint growth industry, which has good investment prospects. The past performance of an industry is not a good predictor of the future- if one look very far into the future.

8.9.1 CHARACTERISTICS OF AN INDUSTRY ANALYSIS

In an industry analysis, the following key characteristics should be considered by the analyst. These are explained as below:

1. **Post sales and Earnings performance:** The two important factors which play an important role in the success of the security investment are sales and earnings. The historical performance of sales and earnings should be given due consideration, to know how the industry have reacted in the past. With the knowledge and understanding of the reasons of the past behaviour, the investor can assess the relative magnitude of performance in future. The cost structure of an industry is also an important factor to look into. The higher the cost component, the higher the sales volume necessary to achieve the firm's break-even point, and vice-versa.
2. **Nature of Competition:** The numbers of the firms in the industry and the market share of the top firms in the industry should be analyzed. One way to determine competitive conditions is to observe whether any barriers to entry exist. The demand of particular product, its profitability and price of concerned company scrip's also determine the nature of competition. The investor before investing in the scrip of a company should analyze the market share of the particular company's product and should compare it with other companies. If too many firms are present in the organized

sector, the competition would be severe. This will lead to a decline in price of the product.

3. **Raw Material and Inputs:** Here, we have to look into the industries, which are dependent upon imports of scarce raw material, competition from other companies and industries, barriers to entry of a new company, protection from foreign competition, import and export restriction etc. An industry which has a limited supply of materials domestically and where imports are restricted will have dim growth prospects. Labour is also an input and industries with labour problems may have difficulties of growth.
4. **Attitude of Government towards Industry:** It is important for the analyst or prospective investor to consider the probable role government will play in industry. Will it provide financial support or otherwise? Or it will restrain the industry's development through restrictive legislation and legal enforcement? The government policy with regard to granting of clearance, installed capacity and reservation of the products for small industry etc. are also factors to be considered for industry analysis.
5. **Management:** An industry with many problems may be well managed, if the promoters and the management are efficient. The management likes Tatas, Birlas, Ambanies etc. who have a reputation, built up their companies on strong foundations. The management has to be assessed in terms of their capabilities, popularity, honesty and integrity. In case of new industries no track record is available and thus, investors have to carefully assess the project reports and the assessment of financial institutions in this regard. A good management also ensures that the future expansion plans are put on sound basis.
6. **Labour Conditions and Other Industrial Problems:** The labour scenario in a particular industry is of great importance. If we are dealing with a labour intensive production process or a very mechanized capital intensive process where labour performs crucial operations, the possibility of strike looms as an important factor to be reckoned with. Certain industries with problems of marketing like high storage costs, high transport costs etc. leads to poor growth potential and investors have to be careful in investing in such companies.
7. **Nature of Product Line:** The position of the industry in the life cycle of its growth- initial stage, high growth stage and maturing stage are to be noted. It is also necessary to know the industries with a high growth potential like computers, electronics, chemicals, diamonds etc., and whether the industry is in the priority sector of the key industry group or capital goods or consumer goods groups. The importance attached by the government in their policy and of the Planning Commission in their assessment of these industries is to be studied.
8. **Capacity Installed and Utilized:** The demand for industrial products in the economy is estimated by the 8. Planning Commission and the Government and the units are given licensed capacity on the basis of these estimates. If the demand is rising as expected and market is good for the

products, the utilization of capacity will be higher, leading to bright prospects and higher profitability. If the quality of the product is poor, competition is high and there are other constraints to the availability of inputs and there are labour problems, then the capacity utilization will be low and profitability will be poor.

9. **Industry Share Price Relative to Industry Earnings:** While making investment the current price of securities in the industry, their risk and returns they promise is considered. If the price is very high relative to future earnings growth, the investment in these securities is not wise. Conversely, if future prospects are dim but prices are low relative to fairly level future patterns of earnings, the stocks in this industry might be an attractive investment.
10. **Research and Development:** For any industry to survive in the national and international markets, product and production process have to be technically competitive. This depends upon the research and development in the particular industry. Proper research and development activities help in obtaining economic of scale and new market for product. While making investment in any industry the percentage of expenditure made on research and development should also be considered.
11. **Pollution Standards:** These are very high and restricted in the industrial sector. These differ from industry to industry, for example, in leather, chemical and pharmaceutical industries the industrial effluents are more.

8.9.2 TECHNIQUES OF INDUSTRY FACTORS

The techniques (long term and short term) for evaluating industry factors are explained in the following sections. These are:

8.9.2.1 END-USE AND REGRESSION ANALYSIS

End-use analysis for product demand analysis refers to a process whereby the analyst attempts to diagnose the factors that determine the demand for output of the industry. In a single product firm, units demanded multiplied by price will equal sales revenue. The analyst frequently forecast the factors like disposable income, per capita consumption, price elasticity of demand etc. that influence the demand of the product. For studying the relationship between various variables simple linear regression analysis and correlation analysis is used. Industry sales against time, industry sales against macro-economic variables like gross national product, personal income disposable income and industry earnings over time may be regressed. When two or more independent variables are better able to explain variability in the dependent variables, the multiple regression analysis is used.

8.9.2.2 INPUT-OUTPUT ANALYSIS

It is a way of getting inside demand analysis or end use analysis. It reflects the flow of goods and services through the economy including intermediate steps in the production process as goods proceed from raw material stage to final

consumption stage. Thus input-output analysis observes patterns of consumption at all stages in order to direct any changing patterns or trends that might indicate the growth or decline on industries. This technique is more appropriate for an intermediate or long term forecast than for short term forecast.

8.9.2.3 GROWTH RATE

The growth rate of different industry should be forecasted by considering historical data. Once the growth rate is estimated, future values of earnings or sales may be forecast. Since the growth rate is such an important factor in determining the stock prices, not only its size but its duration must be estimated. Sometimes, patents expire, competition within an industry becomes more aggressive because foreign firms begin to compete, economically depressed periods occur or other factors cause growth rate to drop.

8.10 SUMMARY

Investors are concerned with those forces in the economy which affect the performance of organization in which they wish to participate, through purchase of stock. By identifying key assumptions and variables, we can monitor the economy and gauge the implications of new information on our economic outlook and industry analysis. The profit potential and peril of a firm are connected to the possibilities of the business to which it has a place. The possibilities of different businesses thus are to a great extent affected by the advancement of full scale economy. The full scale economy is the in general monetary condition in which all organizations work. The key factors depict the condition of large scale economy are-GDP, reserve funds and ventures, modern development rate and so forth. Numerous market analysts trust that the advancement of pretty much every industry might be dissected as far as its life cycle. The methodical investigation of explicit highlights and qualities are likewise vital for settling on the venture choices.

8.11 SELF-ASSESSMENT QUESTION

- Q.1.** Define Fundamental Analysis. What is the importance of economic variables in such analysis?
- Q.2.** How is a fundamental analysis useful to a prospective investor?
- Q.3.** What is the meaning of company analysis? What financial statements in your opinion are helpful in understanding the company's prospects?
- Q.4.** Do you think that knowing the current status of economy is useful in analyzing stock market movements? If so, explain.
- Q.5.** Why industry analysis is important in security valuation? Bring out the important considerations in industry analysis.
- Q.6.** What are the important points to be considered in industry analysis? Discuss the techniques of evaluating industry and economic factors.

- Q.7. What is industry life cycle? Bring out its relevance in security analysis.
- Q.8. How would you classify shares into growth, cyclical and defensive? Name some stock in each group and explain.

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UNIT-9 COMPANY LEVEL ANALYSIS

UNIT FRAMEWORK

- 9.1 Purpose
- 9.2 Estimation of Future Price
- 9.3 Quantitative Analysis
- 9.4 Forecasting Earnings per Share
- 9.5 Traditional Methods of Forecasting EPS
- 9.6 Modern Methods of Forecasting EPS
- 9.7 Qualitative Analysis
- 9.8 Summary
- 9.9 Self-Assessment Questions
- 9.10 Text and References

9.1 PURPOSE

The objectives of this unit are:

- To discuss estimation of future price
- To explain the quantitative analysis;
- To list the forecasting earnings per share,
- To identify the traditional methods of forecasting EPS,
- To describe the modern methods of forecasting EPS,
- To discuss over the qualitative analysis.

9.2 ESTIMATION OF FUTURE PRICE

At the lapse date, a futures contract that calls for immediate settlement should have a futures price equal to the spot price. Before settlement, futures and spot prices need not be the same. The difference between the prices is called the basis of the futures contract. It converges to zero as the contract approaches maturity. To understand how futures prices are established requires understanding the behavior of the basis. The basis for a forward contract is defined in a similar way. Because of the marking to-market feature of futures, there is no apparent reason to suspect that futures prices should equal forward prices. However, in some circumstances the prices are identical. The first part of this chapter investigates these conditions. The second part of this chapter takes a closer look at

the determinants of the basis in a perfect market. In particular, we investigate the cost-of-carry model which quantifies the basis and provides an explicit model of futures prices. We explore other properties of futures prices, examine the relationship between futures prices and expected future spot prices and investigate the determinants of the volatility of futures prices. A [futures contract](#) is nothing more than a standard forward contract. Therefore, the determinants of the value of either type of contract are the same, so the following discussion will focus on futures. When a contract is 1st entered into, the price of a futures contract is determined by the spot price of the underlying asset, adjusted for time plus benefits and [carrying costs](#) accrued during the time until settlement. Even if the contract is closed out before the delivery date, these costs and benefits are taken into account in determining the price of the contract, since there may be a delivery. Benefits that accrue with ownership include dividends and interest that is paid by the underlying asset. Costs associated with ownership include storage costs, such as with oil, and the interest rate used to determine the present value of a transaction, which represents the opportunity cost of delaying the transaction.

9.3 QUANTITATIVE ANALYSIS

Quantitative analysis helps in providing a measure of future value of equity share based on quantitative factors. There are two methods which is used under this approach are:

- Dividend Discounted Method
- Price Earnings Approach

9.3.1 DIVIDEND DISCOUNTED METHOD

The dividend discount model is a method for assessing the present value of a stock based on the growth rate of dividends. The present value is calculated by discounting the future cash dividend at cost of equity. The formula is Future cash flows include dividends and the sale price of the stock when it is sold. This DDM price is the intrinsic value of the stock. If the stock pays no dividend, then the expected future cash flow is the sale price of the stock.

Intrinsic Value = Sum of Present Value of Future Cash Flows

Intrinsic Value = Sum of Present Value of Dividends + Present Value of Stock Sale Price

Formula for computing Stock's Intrinsic Value
$\text{Stock's Intrinsic Value} = \frac{D1}{(1+k)^1} + \frac{D2}{(1+k)^2} + \dots + \frac{Dn}{(1+k)^n} + \frac{P}{(1+k)^n}$

P = Selling Price of Stock

D = Annual Dividend Payment

k = Capitalization Rate

n = Number of Years until Stock is Sold;

If the dividend grows at a constant rate and the term 'n' approaches infinity, then the above equation can be rewritten as under:

$$\text{Intrinsic Value} = \frac{D_1}{k-g}$$

D_1 = Next Year's Dividend

k = Capitalization Rate

g = Dividend Growth Rate

In the above equation, it is assumed that 1 dividend is paid at the end of each year and that the stock is sold at the end of the n^{th} year. This is done so that the capitalization rate (**k**) is an annual rate, since most rates of return are presented as annual rates, which simplifies the discussion. We are only interested in the equation's pedagogical value rather than specific results. Note also that this equation is similar to the formula for calculating bond prices in terms of the yield to maturity, where the dividend payment is replaced with the coupon payment, the stock price is replaced by the par value of the bond, and the capitalization rate is replaced with the yield to maturity to yield the bond price.

Note that if the stock is never sold, then it is essentially perpetuity, and its price is equal to the sum of the present value of its dividends. Since the DDM considers the current sale price of the stock to be equal to its future cash flows, then it must also be true that the future sale price of the stock is equal to the sum of the cash flows subsequent to the sale discounted by the capitalization rate.

In an efficient market, the market price of a stock is considered equal to the intrinsic value of the stock, where the capitalization rate is equal to the **market capitalization rate**, the average capitalization rate of all market participants.

Example: Mr. X shipping has declared a dividend of 12% for the year ending March 2017. If the dividend will show a growth rate of 10% and cost of equity is 20%, what is the value of the stock as of March 2017?

Expected Dividend for the year 2018:	$12 \times (1+10\%) = 13.2\%$
Expected Dividend per share (Face Value Rs. 10)	= Rs. 1.32
Growth Rate of Dividend	= 10% or .10
Cost of Equity	= 20% or 0.20
Value as per constant DDM	$= 1.32 / (0.20 - 0.10)$
	= Rs. 13.20

The price of the stock as on March 31, 2018 was Rs. 12.35 against its value of Rs. 13.20. Hence, one can say that the stock was underpriced provided the assumptions on dividend growth rate and cost of equity are correct.

There are 3 models used in the dividend discount model:

1. **Zero-growth**, which assumes that all dividends paid by a stock remain the same;
2. The **constant-growth model**, which assumes that dividends grow by a specific percent annually; and
3. The **variable-growth model**, which typically divides growth into 3 phases: a fast initial phase, then a slower transition phase that ultimately ends with a lower rate that is sustainable over a long period.

9.3.1.1 ZERO-GROWTH RATE DDM

Since the zero-growth model assumes that the dividend always stays the same, the stock price would be equal to the annual dividends divided by the required rate of return.

Stock's Intrinsic Value = Annual Dividends / Required Rate of Return

This is basically the same formula used to calculate the value of a perpetuity, which is a bond that never matures, and can be used to price [preferred stock](#), which pays a dividend that is a specified percentage of its par value. A stock based on the zero-growth model can still change in price if the capitalization rate changes, as it will if perceived risk changes, for instance.

9.3.1.2 CONSTANT-GROWTH RATE DDM (GORDON GROWTH MODEL)

The constant-growth DDM (Gordon Growth model, because it was popularized by Myron J. Gordon) assumes that dividends grow by a specific percentage each year, and is usually denoted as g , and the capitalization rate is denoted by k .

Formula of Constant-Growth Rate DDM
$\text{Intrinsic Value} = \frac{D_1}{k-g}$
D_1 = Next Year's Dividend k = Capitalization Rate g = Dividend Growth Rate

The constant-growth model is often used to value stocks of mature companies that have increased the dividend steadily over the years. Although the annual increase is not always the same, the constant-growth model can be used to approximate an intrinsic value of the stock using the average of the dividend growth and projecting that average to future dividend increases. Note that if both the capitalization rate and dividend growth rate remains the same every year, then

the denominator doesn't change, so the stock's intrinsic value will increase annually by the percentage of the dividend increase. In other words, both the stock price and the dividend amount will increase by the constant-growth factor

9.3.1.3 VARIABLE-GROWTH RATE DDM

Variable-growth rate models (aka multi-stage growth models) can take many forms, even assuming the growth rate is different for every year. However, the most common form is one that assumes 3 different rates of growth: an initial high rate of growth, a transition to slower growth, and lastly, a sustainable, steady rate of growth. Basically, the constant-growth rate model is extended, with each phase of growth calculated using the constant-growth method, but using 3 different growth rates of the 3 phrases. The present values of each stage are added together to derive the intrinsic value of the stock. Sometimes, even the capitalization rate, or the required rate of return, may be varied if changes in the rate are projected.

ADVANTAGES

There are three major reasons why the dividend discount model is a popular valuation technique:

1. **Simplicity of Calculations-** Once investors know the variables of the model, calculating the value of a share of stock is very straightforward. It only takes a little bit of algebra to calculate the price of stock.
2. **Sound and Logical Basis for the Model-** The model is based on the premise that investors purchase stocks so that they can get paid in the future. Even though there are a number of reasons that investors may purchase a security, this basis is correct. If investors never received a payment for their security it wouldn't be worth anything.
3. **The Process can be Reversed to Determine Growth Rates Experts Predicted-** After looking at the price of a share of stock, investors can rearrange the process to determine the dividend growth rates that are expected for the company. This is useful if they know the predicted value of a share of stock but want to know what the expected dividends are.

DISADVANTAGES

Although many investors still use the model, it has become a lot less popular in recent years for a variety of reasons:

1. **Reflects Rationality, Not Reality-** The dividend discount model is based on the concept that investors invest in stocks that are most likely to pay them the most. Although this is the way that investors should behave, it does not always reflect the way investors actually behave. Many investors purchase stocks for reasons that have nothing to do with the company's financial position or its future dividend payments. Some investors purchase a company that happens to be more glamorous or interesting. This often explains why there is a discrepancy between a stock's intrinsic value and the actual market value.

2. **Difficulty Determining the Variables that goes into the Model-** The dividend discount model is simple to use. However, it is difficult to determine the numbers that go into it, which can yield inaccurate results. Companies are often unpredictable with their dividends, so forecasting them for this model is difficult. It is also very difficult to estimate the future sales of a company, which influences a corporation's abilities to maintain or grow dividends.
3. **Dividends aren't the only way Earnings have Value to Investors-** Investors may be primarily concerned with dividends, but all earnings are still owned by investors. Dividends only represent the share of earnings that a corporation chooses to pay out. Retained earnings are still owed to investors and still count towards their [wealth](#). This is why newer models evaluate the overall cash flow of a company, not the amount that is paid back to investors.
4. **Investor Bias-** Investors have a tendency to confirm their own expectations. This means that most investors are going to come up with their own values for a stock since many of the inputs here are somewhat subjective. Only those who can force themselves to be objective are likely to find accurate variables for the model.
5. **Sensitive Valuation Model-** This model is very sensitive to small changes in input variables. Therefore, it can be easy to accidentally identify a security as being overpriced or underpriced if you are slightly off with your estimate of specific input.
6. **Useless for Valuing Stocks with No Current or Near-Future Dividend Payments-** As mentioned earlier, investors can only receive value from a company that will pay them dividends at some point. However, some companies don't currently offer dividends at a given time and aren't expected to in the near future. A decade ago, Microsoft had never paid a dividend, but was one of the most successful stocks ever. Investors knew the value behind the company and that they could receive dividends later on. However, the dividend discount model would have been a useless way to try to value the stock.

Thus we can say that the dividend discount model is a useful heuristic model that relates the present stock price to the present value of its future cash flows in the same way that a bond is priced in terms of its future cash flows. However, bond pricing is more exact, especially if the bond is held to maturity, since its cash flows and the interest rate of those cash flows are known with certainty, unless the bond issuer defaults. The dividend discount model, however, depends on projections about company growth rate and future capitalization rates of the remaining cash flows. For instance, in a bear market, the capitalization rate will be higher than in a bull market investors will demand a higher required rate of return to compensate them for a perceived greater amount of risk. Getting either the capitalization rate or the growth rate wrong will yield an incorrect intrinsic value for the stock, especially since even small changes in either of these factors will greatly affect the calculated intrinsic value. Furthermore, the longer

the time considered, the more likely both factors will be wrong. Hence, the true intrinsic value of a stock is unknowable, and, thus, it cannot be determined whether a stock is undervalued or overvalued based on a calculated intrinsic value, since different investors will have a different opinion about the company's future.

9.3.2 PRICE EARNINGS APPROACH

As per this price earning approach, the future price of equity is calculated by multiplying the P/E ratio by the expected EPS.

$$P = \text{EPS} \times \text{P/E ratio}$$

The Price Earnings Ratio (P/E Ratio) is the relationship between a company's stock price and earnings per share (EPS)Earnings Per Share Formula (EPS)The Earnings Per Share formula is a financial ratio, which counts net earnings against the total outstanding shares over a fixed period of time. A higher EPS ratio indicates a company's ability to generate profits for common shareholders. It is a popular ratio that gives investors a better sense of the value fair value refers to the actual value of a product, stock, or security that is agreed upon by both the seller and the buyer. Fair value is applicable to the company. The P/E ratio shows the expectations of the market and is the price you must pay per unit of current earnings. Net Income is a key line item, not only in the income statement, but in all three core financial statements. While it is arrived at through the income statement, the net profit is also used in both the balance sheet and the cash flow statement. (or future earnings, as the case may be). This ratio is much important for calculating because of Investors want to buy financially sound companies that offer a good return on investment (ROI)ROI Formula (Return on Investment)ROI (Return on Investment) is a formula used to calculate the benefit an investor receives in relation to their investment cost equal to net income divided. Among the many ratios, the P/E is part of the research process Equity Research Analyst An equity research analyst provides research coverage of public companies and distributes that research to clients. We cover analyst salary, job description for selecting stocks, because we can figure out whether we are paying a fair price. Similar companies within the same industry are grouped together for comparison, regardless of the varying stock prices. Moreover, it's quick and easy to use when we're trying to value a company using earnings. When a high or a low P/E is found, we can quickly assess what kind of stock or company we are dealing with.

Limitations of Price Earnings Ratio

Finding the true value of a stock cannot just be calculated using current year earnings. The value depends on all expected future cash flows. Cash Flow (CF) is the increase or decrease in the amount of money a business, institution, or individual has. In finance, the term is used to describe the amount of cash (currency) that is generated or consumed in a given time period. There are many types of Cash Flows and important uses for it in running a business and earnings of a company. Price Earnings Ratio is used as a good starting point. It means little just by itself unless we have some understanding of the growth prospects in EPS and risk profile of the company. An investor must dig deeper into the company's

financial statements. The three financial statements are the income statement, the balance sheet, and the statement of cash flows. These three core statements are intricately linked to each other and this guide will explain how they all fit together. By following the steps below you'll be able to connect the three statements on your own. and use other valuation and financial analysis methods. Financial analysis involves using financial data to assess a company's performance and make recommendations how it can improve.

9.4 FORECASTING EARNINGS PER SHARE

Earning is the most essential number in esteeming the stock. The most critical and the standard wellspring of getting data about the profit of the organization is its budget reports. Out of the two explanations, to be specific, Balance Sheet and Income Statement, it is the pay articulation that is all the more frequently utilized so as to survey the future condition of the firm. The pay articulation of the previous couple of years demonstrates the sort of development that the organization is seeing on deals and income. An examination of pay articulation of the organization opposite salary proclamation of the business demonstrates the piece of the pie of the firm. While the chronicled information separated out from the pay proclamation is valuable for assessing the income, one need to investigate the present and future prospects. For example, quarterly data will be amazingly valuable in this unique circumstance. What's more, experts can create procedures connecting organization's fortune with a couple of other monetary factors. Presently a-days, it is conceivable to get speculation examiners expected data and they are distributed in a few sites and paper.

There are different strategies utilized to survey the future standpoint of the income, costs and profit of the firm given the financial and industry viewpoint. These techniques can be comprehensively arranged into two classes, to be specific, conventional and current. Under the conventional methodology, the forecaster acquires the gauge of single estimation of the variable. While on account of modem approach, he gets the scope of qualities with the likelihood of every event. Give us a chance to talk about these two methodologies in detail.

9.5 TRADITIONAL METHODS OF FORECASTING EPS

Earnings per share or EPS are an important financial measure, which indicates the profitability of a company. It is calculated by dividing the company's net income with its total number of outstanding shares. It is a tool that market participants use frequently to gauge the profitability of a company before buying its shares. EPS is the portion of a company's profit that is allocated to every individual share of the stock. It is a term that is of much importance to investors and people who trade in the stock market. The higher the earnings per share of a company, the better is its profitability.

Under the traditional approach the following methods of forecasting are adopted:

- ROI approach
- Market share approach
- Independent estimates approach

9.5.1 ROI APPROACH

As per Investopedia, ROI is a performance measure used to evaluate the efficiency of an investment or to compare the efficiency of a number of different investments. To calculate ROI, the benefit (return) of an investment is divided by the cost of the investment; the result is expressed as a percentage or a ratio. Each definition focuses on certain ROI aspects. Such definitions reflect the fact that approaches to ROI and even ROI concepts vary from company to company and from practitioner to practitioner; most likely every consultant has a particular variation. Despite the diversity of the definitions, the primary notion is the same: ROI is a fraction, the numerator of which is “net gain” (re-turn, profit, benefit) earned as a result of the project (activity, system operations), while the denominator is the “cost” (investment) spent to achieve the result.

There are several versions of the ROI formula. The two most commonly used are shown below:

ROI = Net Income / Cost of Investment

or

ROI = Investment Gain / Investment Base

ROI calculations are simple and help the investor decide whether to take or skip an investment opportunity. The calculation can also be an indication of how an investment has performed to date. When an investment shows a positive or negative ROI, it can be an important signal to the investor about their investment.

Using an ROI calculation, the investor can separate low-performing investments from high-performing investments. With this approach, investors and managers can attempt to optimize their portfolio of investments.

ROI popularity is due to many objective and subjective reasons.

Objective Reasons for ROI Popularity:

- Anecdotal evidence of successful use.
- Easy to understand and straightforward.
- Easy to compute.
- Encourages prudent detailed financial analysis.

A Return on Investment as a Metric for Evaluating Information Systems

- Encourages cost efficiency and focuses on one of the main corporate metrics – profit-ability.
- Being based on the accounting records provides objective outputs.
- Data used is available in the accounting system or official documentation.
- Permits comparisons of profitability of dissimilar businesses/projects.
- Promotes accountability. Transparent collection and use of official financial data con-tributes to responsible behaviours of those involved in data collection and evaluations.
- Encourages project teams and finance/accounting practitioners to collaborate.

Subjective Reasons for Traditional ROI Popularity:

- Seems familiar from college textbooks.
- Feels familiar from personal investment experience.
- Seemingly easy to collect and process data.
- Use of data and math makes creates anticipation of an accurate and definitive result.
- Single number result – simplifying for the mind.
- Provides quantifiable evidence of value.
- Single measure offers a seemingly global evaluation of performance.

Advantages of ROI:

ROI has the following advantages:

1. **Better Measure of Profitability-** It relates net income to investments made in a division giving a better measure of divisional profitability. All divisional managers know that their performance will be judged in terms of how they have utilized assets to earn profit, this will encourage them to make optimum use of assets. Also, it ensures that assets are acquired only when they are sure to give returns in consonance with the organization's policy.

Thus, the major focus of ROI is on the required level of investment. For a given business unit at a given point of time, there is an optimum level of investment in each asset that helps maximize earnings. A cost-benefit analysis of this kind helps managers find out the rate of return that can be expected from different investment proposals. This allows them to choose an investment that will enhance both divisional and organizational profit performance as well as enable effective utilization of existing investments.

2. **Achieving Goal Congruence-** ROI ensures goal congruence between the different divisions and the firm. Any increase in divisional ROI will bring improvement in overall ROI of the entire organization.
3. **Comparative Analysis-** ROI helps in making comparison between different business units in terms of profitability and asset utilization. It may be used for inter firm comparisons, provided that the firms whose results are being compared are of comparable size and of the same industry. ROI a good measure because it can be easily compared with the related cost of capital to decide the selection of investment opportunities.
4. **Performance of Investment Division-** ROI is significant in measuring the performance of investment division which focuses on earning maximum profit and making appropriate decisions regarding acquisition and disposal of capital assets. Performance of investment centre manager can also be assessed advantageously with ROI.
5. **ROI as Indicator of Other Performance Ingredients-** ROI is considered the single most important measure of performance of an investment division and it includes other performance aspects of a business unit. A better ROI means that an investment centre has satisfactory results in other fields of performance such as cost management, effective asset utilization, selling price strategy, marketing and promotional strategy etc.
6. **Matching with Accounting Measurements-** ROI is based on financial accounting measurements accepted in traditional accounting. It does not require a new accounting measurement to generate information for calculating ROI. All the numbers required for calculating ROI are easily available in financial statements prepared in conventional accounting system. Some adjustments in existing accounting numbers may be necessary to compute ROI, but this does not pose any problem in calculating ROI.

Disadvantages of ROI:

ROI has the following limitations-

1. Satisfactory definition of profit and investment are difficult to find. Profit has many concepts such as profit before interest and tax, profit after interest and tax, controllable profit, profit after deducting all allocated fixed costs. Similarly, the term investment may have many connotations such as gross book value, net book value, historical cost of assets, and current cost of assets, assets including or excluding intangible assets.
2. While comparing ROI of different companies, it is necessary that the companies use similar accounting policies and methods in respect of valuation of stocks, valuation of fixed assets, apportionment of overheads, treatment of research and development expenditure, etc.
3. ROI may influence a divisional manager to select only investments with high rates of return (i.e., rates which are in line or above his target ROI). Other investments that would reduce the division's ROI but could increase the value of the business may be rejected by the divisional manager. It is

likely that another division may invest the available funds in a project that might improve its existing ROI (which may be lower than a division's ROI which has rejected the investment) but which will not contribute as much to the enterprise as a whole.

These types of decisions are sub-optimal and can distort an enterprise's overall allocation of resources and can motivate a manager to make under investing in order to preserve its existing ROI. A good or satisfactory return is defined as an ROI in excess of some minimum desired rate of return, usually based on the firm's cost of capital.

Business units having higher ROI and some other units having lower ROI are impacted differently by using ROI as investment selection criteria, ROI evaluation provides disincentive to the best division (having higher ROI) to grow, whereas the division with the lowest ROI will have an incentive to invest in new projects to improve their ROI. In this situation, the most profitable units are demotivated to invest in a project that does not exceed their current ROI, although the project would give a good return. This may be in conflict with goal congruence and interests of the firm as a whole.

Suppose a division's ROI is 25%

$$\text{ROI} = \text{Profit Rs } 1,00,000 / \text{Investment Rs } 4,00,000 \times 100$$

Suppose, there is an opportunity to make additional investment of Rs 2,00,000 which will give 20% ROI. This investment is acceptable to the company because the company requires a minimum 15% ROI for this type of investment.

This investment lowers the division's ROI to 23.3% calculated as follows:

$$\text{New ROI} = \text{Rs } 1,00,000 + (\text{Rs } 4,00,000 / \text{Rs } 4,00,000) + (\text{Rs } 2,00,000 \times 100)$$

A comparison of old ROI (25%) with the new ROI (23%) would imply that performance has declined. Consequently, a divisional manager might decide not to make such an investment.

4. ROI provides focus on short term results and profitability; long term profitability focus is ignored. ROI considers current period's revenue and cost and do not pay attention to those expenditures and investments that will increase long term profitability of a business unit. Based on ROI, the managers tend to avoid the new investments and expenditure due to returns being uncertain or return may not be realized for some time.

Managers using ROI may cut spending on employee training, productivity improvements, advertising, research and development with the narrow objective of improving the current ROI. However, these decisions may impact long term profitability negatively. Therefore, it is advisable for the investment division or business unit to use ROI as only one parameter of an overall evaluation criterion to decide the acceptances/rejection of new investment.

5. Investment Centre managers can influence (manipulate) ROI by changing accounting policies, determination of investment size or asset, treatment of

certain items as revenue or capital. Sometimes, managers may reduce the investment base by scrapping old machines that still earn a positive return but less than others. Thus, the practice of abandoning old machines that are still serviceable may be used by managers to increase their ROI and a series of such actions may be harmful to the organization as a whole.

9.5.2 MARKET SHARE APPROACH

This approach exudes from the business examination. When the gauge the future prospects of the business is finished, the examiner would then investigate the organizations, which are the pioneers and pacesetters in the business and would then discover the piece of the pie of the firm to be dissected. The following steps can be embraced to actualize this approach:

- Estimating the total sale of industry
- Estimating the firm's share out of market share
- Estimating the profit margin
- Multiplying sales by profit margin for getting total earnings
- Divide earnings by number of shares outstanding to get EPS.
- Multiplying EPS by P/E ratio.

So as to assess the net revenue under this approach, the expert needs to comprehend the increase and conduct of expense and costs amid the significant scope of movement. This calls for having a comprehension of benefit volume relationship of the firm. The examiner should investigate different segment of costs like:

- Fixed and variable expense (or working influence), and
- The dimension of offers volume the firm is probably going to achieve amid the conjecture time frame

9.5.3 INDEPENDENT ESTIMATES APPROACH

Under this methodology, every single thing of income and cost is assessed independently and summed up to touch base at the future EPS. All the three methodologies are generally used by security investigators. Be that as it may, these are not totally unrelated methodologies. Yet, one vital and basic impediment of these methodologies is that they demonstrate point gauge of EPS and HPY and in this way, append 100% likelihood of result.

9.6 MODERN METHODS OF FORECASTING EPS

Under modern approach to deal with anticipating income of an organization, factual procedures are utilized. The accompanying procedures are commonly incorporated into this class:

- Regression and correlation analyses

- Trend analysis
- Decision tree analysis

Let us quickly examine each of these

9.6.1 REGRESSING AND CORRELATION ANALYSIS

Regression and correlation analysis procedures are used to study the relationships between variables. Regression is used to predict the value of one variable based on the value of a different variable. Correlation is a measure of the strength of a relationship between variables. The variables are data which are measured and/or counted in an experiment. In the case of the examples used here, the data were obtained by counting the breathing rate of goldfish in a laboratory experiment. The data for regression and correlation consist of pairs in the form (x, y). The independent variable (x) is determined by the experimenter. This means that the experimenter has control over the variable during the experiment. In our experiment, the temperature was controlled during the experiment. The dependent variable (y) is the effect that is observed during the experiment. It is assumed that the values obtained for the dependent variable result from the changes in the independent variable. Regression and correlation analyses will determine the nature of this relationship, if any, and the strength of the relationship. It can be a consideration that all of the (x, y) pairs form a population. In some experiments, numerous observations of y are taken at each value of x. In these cases, each set of values of y taken at a particular value of x form a subpopulation of the data. Finding out the interrelationships of relevant variables the techniques of correlation and regression are used. When the inter-relationship covers two variables, simple regression is used and for more than two variables, multiple regression technique is used. Using this approach, security analysts may find out the inter-relationship between the variables belonging to the economy, industry and the company. For instance, if the analyst believes that the sales of the firm depends on GDP growth rate, monsoon, and population growth rate, then it is possible to set a relationship between sales and other independent variables by collecting the data pertaining to sales and other variables for the last few years.

9.6.2 TREND ANALYSIS

While utilizing this analysis, the relationship of just a single variable is tried after some time utilizing the regression analysis. As it were, it is the basic regression analysis where the between relationship of a specific variable is tried versus time. That is the reason the name trend analysis. It is very helpful to comprehend the recorded conduct of the variable with the end goal of the security analysis.

9.6.3 DECISION TREE ANALYSIS

The above two techniques are viewed as better than the customary strategies utilized to estimate the estimation of profit per share. Be that as it may,

an essential restriction remains. Both these techniques give just point gauge of the conjecture esteem. So as to enhance basic leadership process, data identifying with the likelihood of event of the estimate esteem is very helpful. In this manner a scope of estimations of the variable with the probabilities of event of each esteem will go far to enhance choice by the financial specialist. To defeat these restrictions, decision tree analysis is used.

Decision tree analysis involves making a tree-shaped diagram to chart out a course of action or a statistical probability analysis. It is used to break down complex problems or branches. Each branch of the decision tree could be a possible outcome. The benefit of a decision tree is that it lists out all the possible outcomes and the revenue or loss attached to each. Information available can then be used by the management of the company to make an informative decision about the project or the investment they are planning to make. The tree structure in the decision model helps in drawing a conclusion for any problem which is more complex in nature. The model is used not just in corporate finance, but in philosophy, economic forecasting as well. Under the decision tree model, an individual has to come to a conclusion about investing in a particular project or not. The management often uses these models because they lay out the information in a graphical way with possible probabilities attached to the final outcome.

Decision tree basics

The expected value is an essential idea not only in decision trees, but throughout risk and decision analysis. Here are some of its interpretations and properties.

Expected value

- Is the long-run average value of the chance
- Is the probability-weighted average of the end-node values
- Is a surrogate for the entire chance node
- Is a function of both the probabilities and the values
- Has the same units as the end-node values
- Is usually not equal to one of the end-node values, but always between the minimum and maximum
- Provides no information about risk

Common usages of decision tree models include the following:

- **Variable selection-** The number of variables that are routinely monitored in clinical settings has increased dramatically with the introduction of electronic data storage. Many of these variables are of marginal relevance and, thus, should probably not be included in data mining exercises. Like stepwise variable selection in regression analysis, decision tree methods can be used to select the most relevant input variables that should be used to form decision tree models, which can subsequently be used to formulate clinical hypotheses and inform subsequent research.

- **Assessing the relative importance of variables-** Once a set of relevant variables is identified, researchers may want to know which variables play major roles. Generally, variable importance is computed based on the reduction of model accuracy (or in the purities of nodes in the tree) when the variable is removed. In most circumstances the more records a variable have an effect on, the greater the importance of the variable.
- **Handling of missing values-** A common - but incorrect - method of handling missing data is to exclude cases with missing values; this is both inefficient and runs the risk of introducing bias in the analysis. Decision tree analysis can deal with missing data in two ways: it can either classify missing values as a separate category that can be analyzed with the other categories or use a built decision tree model which set the variable with lots of missing value as a target variable to make prediction and replace these missing ones with the predicted value.
- **Prediction-** This is one of the most important usages of decision tree models. Using the tree model derived from historical data, it's easy to predict the result for future records.
- **Data manipulation-** Too many categories of one categorical variable or heavily skewed continuous data are common in medical research. In these circumstances, decision tree models can help in deciding how to best collapse categorical variables into a more manageable number of categories or how to subdivide heavily skewed variables into ranges.

The decision tree method is a powerful statistical tool for classification, prediction, interpretation, and data manipulation that has several potential applications in medical research. Using decision tree models to describe research findings has the following advantages:

- Simplifies complex relationships between input variables and target variables by dividing original input variables into significant subgroups.
- Easy to understand and interpret.
- Non-parametric approach without distributional assumptions.
- Easy to handle missing values without needing to resort to imputation.
- Easy to handle heavy skewed data without needing to resort to data transformation.
- Robust to outliers.

As with all analytic methods, there are also limitations of the decision tree method that users must be aware of. The main disadvantage is that it can be subject to over fitting and under fitting, particularly when using a small data set. This problem can limit the generalizability and robustness of the resultant models. Another potential problem is that strong correlation between different potential input variables may result in the selection of variables that improve the model statistics but are not causally related to the outcome of interest. Thus, one must be

cautious when interpreting decision tree models and when using the results of these models to develop causal hypotheses.

9.7 QUALITATIVE ANALYSIS

Qualitative analysis is a securities analysis that uses subjective judgment based on unquantifiable information, such as management expertise, industry cycles, strength of research and development, and labor relations. Qualitative analysis contrasts with quantitative analysis, which focuses on numbers that can be found on reports such as income statement, balance sheet and other quantifiable metrics. The two techniques, however, will often be used together in order to examine a company's operations and evaluate its potential as an investment opportunity. With the qualitative factors in mind, an investor/analyst can judge whether the quantitatively derived measure of value of equity is reasonable or not and accordingly take informed risk while taking the decision to invest or disinvest shares of a company.

The distinction between qualitative and quantitative approaches is similar to the distinction between human and artificial intelligence. Quantitative analysis uses exact inputs such as profit margins, debt ratios, earnings multiples, and the like. These can be plugged into a computerized model to yield an exact result, such as the fair value of a stock or a forecast for earnings growth. Of course, for the time being, a human has to write the program that crunches these numbers, and that involves a fair bit of subjective judgment. Once they are programmed, though, computers can perform quantitative analysis in fractions of a second, while it might take even the most gifted and highly-trained human's minutes or hours.

Qualitative analysis, on the other hand, deals with intangible, inexact concerns that belong to the social and experiential realm rather than the mathematical one. This approach depends on the kind of intelligence that machines (currently) lack, since things like positive associations with a brand, management trustworthiness, customer satisfaction, competitive advantage and cultural shifts are difficult, arguably impossible, to capture with numerical inputs.

Elements of Qualitative Analysis

Qualitative analysis can sound almost like "listening to your gut," and indeed many qualitative analysts would argue that gut feelings have their place in the process. That does not mean, however, that it is not a rigorous approach. Indeed, it can consume much more time and energy than quantitative analysis.

People are central to qualitative analysis. An investor might start by getting to know a company's management, including their educational and professional backgrounds. One of the most important factors is their experience in the industry. More abstractly, do they have a record of hard work and prudent decision-making, or are they better at knowing – or being related to – the right people? Their reputations are also key: are they respected by their colleagues and peers? Their relationships with business partners are also worth exploring, since these can have a direct impact on operations.

Perhaps more important is the way employees view the company and its management. Are they satisfied and motivated, or do they resent their bosses? The rate of employee turnover can indicate employees' loyalty or lack thereof. What is the workplace culture like? Overly hierarchical offices promote intrigue and competition and sap productive energy; a sleepy, unmotivated environment can mean employees are mainly concerned with punching the clock. The ideal is a vibrant, creative culture that attracts top talent.

Qualitative Analysis in Context

Customers are the only group more crucial to a company's success than management and employees, since they are the source of its revenue. Ironically, if a company places customers' interests before shareholders, it may be a better long-term investment. If feasible, it's a good idea to try being a customer. Say you're considering investing in an airline that has reined in costs, beat earnings estimates in three consecutive quarters and plans to buy back shares. When you try to actually use the airline, however, you find the website bug-ridden, the customer service reps cranky, the extra fees petty and your fellow passengers resentful. Now the financials appear to tell a less attractive story: a jaded incumbent squeezes more from its customers while giving less in return, throwing sops to investors until a better firm comes along to sweep them away.

A company's business model and competitive advantage are a key component of qualitative analysis. What gives the firm an enduring leg up over its rivals? Has it invented a new technology that competitors will find hard to replicate, or that has intellectual property protection? Does it have a unique approach to solving a problem for its customers? Is its brand globally recognized—in a good way? Does its product have cultural resonance or an element of nostalgia? Will there still be a market for it in twenty years? If you can plausibly imagine another company stepping in and doing what this one does just a little bit better, then the barrier to entry may be too low. If the company is not yet established, why will it be the one to create or disrupt its chosen market, and why won't it then be replaced in turn?

9.8 SUMMARY

The examination of an organization is imperative all things considered in the offers of an organization that a speculator contributes. This requires anticipating both future cost of the offer just as profits. Future cost of the offer can be determined utilizing two methodologies: limited profit model and WE proportion approach. Profit per share is the most vital and broadly utilized variable in esteeming value share. Estimating EPS is extremely significant for speculation basic leadership. There are conventional just as modern strategies for estimating EPS. Conventional techniques are ROI approach, Market share approach, and autonomous estimation approach. These strategies give a point gauge of the anticipated variable. Present day anticipating techniques are: relapse and relationship examination, slant investigation, choice tree examination and recreation. Choice tree and reproduction techniques furnish a scope of qualities with likelihood of their results. Such data are very valuable in settling on

speculation choices. In any case, this calls for producing data in regards to probabilities of event of different results. The regular impediment of these methodologies is that these are quantitative in nature.

9.9 SELF ASSESSMENT QUESTIONS

- Q.1.** Company analysis is important for equity investment decision. Why?
- Q.2.** Equity price's estimation is the main challenge in equity investment decision'. Comment.
- Q.3.** What are various methods of quantitative analysis used in equity investment decision? Does it differ from qualitative analysis?
- Q.4.** Describe the various methods of forecasting EPS? According to you Which one is best and why?
- Q.5.** By using imaginary data explain and illustrate the decision tree analysis for forecasting EPS.
- Q.6.** In company analysis evaluation of management is the main challenge. explain it and Comment.
- Q.7.** Describe in brief the dividend discount method.
- Q.8.** Write short notes on the following?
- a) Price-Earnings Approach
 - b) ROI Approach
 - c) Market Share Approach
 - d) Independent Estimates Approach

9.10 TEXT AND REFERENCES

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UNIT-10 TECHNICAL ANALYSIS

UNIT FRAMEWORK

- 10.1 Purpose
- 10.2 Meaning of Technical Analysis
- 10.3 Fundamental Analysis vs. Technical Analysis
- 10.4 Origin and Development of Technical Analysis
- 10.5 Dow Theory
- 10.6 Basic Tenets of Dow Theory
- 10.7 Technical Analysis Techniques
- 10.8 Market Indicator
- 10.9 Limitation of Technical analysis
- 10.10 Summary
- 10.11 Self-Assessment Questions
- 10.12 Text and References

10.1 PURPOSE

The objectives of this unit are:

- To discuss Meaning of Technical Analysis and Distinguish between Fundamental Analysis vs. Technical Analysis
- To explain the Origin and Development of Technical Analysis
- To discuss the Dow Theory and Its Basic Tenets
- To describe the classical and modern both technical analysis techniques
- To discuss the Market Indicators with limitations of Technical Analysis

10.2 MEANING OF TECHNICAL ANALYSIS

Technical Analysis includes an investigation of market-created information like costs and volumes to decide the future heading of value

development. It is a procedure of recognizing pattern inversion at a prior stage to plan the purchasing and moving technique. With the assistance of a few pointers, the connection between cost – volume and supply-request is broke down for the general market and individual stocks.

Assumptions

The essential premises, on which technical analysis is defined, are as per the following:

1. The market estimation of the scrip is dictated by the communication of demand and supply.
2. Free market activity is administered by various components, both discerning and unreasonable. These elements incorporate financial factors depended by the essential examination and in addition conclusions, a state of mind also, surmises.
3. The market limits everything. The cost of the security cited speaks to the expectation, fears and inside data gotten by the market players. Insider data with respect to the issuance of extra offers and right issues may bolster the costs. The loss of income and data with respect to the anticipated work issue may result in fall in cost. These components may cause a move sought after and supply, altering the course of patterns.
4. The market dependably moves in the patterns aside from minor deviations.
5. It is well established actuality that history rehashes itself. It is consistent with securities exchange moreover. In the rising business sector, financial specialists' brain research has upbeat and they buy the offers in incredible volumes driving the costs higher. In the meantime in the down pattern, they might be extremely anxious to escape the market by moving them and in this way dividing the offer cost further. The market professionals expect that past costs foresee what's to come.
6. As the market dependably moves in patterns, examination of past market information can be utilized to foresee future value conduct.

10.3 FUNDAMENTAL ANALYSIS VS. TECHNICAL ANALYSIS

The technical approach is the most seasoned way to deal with value venture going back to the late nineteenth century. It keeps on thriving in present day times too. As a financial specialist, we frequently experience specialized investigation since papers cover it; TV software engineers routinely call specialized specialists for their remarks and speculation warning administrations flow specialized reports. As a way to deal with venture examination, technical analysis is profoundly unique in relation to fundamental analysis.

The basic differences are –

1. While the fundamental analysis believes that the market is 90 percent logical and 10 percent psychological, the technical analysis assumes that the market is 90 percent psychological and 10 percent logical.
2. Like fundamental analysis, technical analysis does not evaluate the large number of fundamental factors relating to the company, the industry and the economy but in it, the internal market data is analyzed with the help of charts and graphs.
3. Technical analysis mainly seeks to predict short-term price movement appealing the short-term traders where fundamental analysis tries to establish long-term values. Hence, it appeals to long term investors.
4. The technical analysis is based on the premise that the history repeats itself. Therefore, the technical analysis answers the question “What had happened in the market” while on the basis of potentialities of market fundamental analysis answers the question, “What will happen in the market”.

10.4 ORIGIN AND DEVELOPMENT OF TECHNICAL ANALYSIS

The principles of technical analysis derive from the observation of financial markets over hundreds of years. The oldest known hints of technical analysis appear in Joseph de la Vega's accounts of the Dutch markets in the 17th century. In Asia, the oldest example of technical analysis is thought to be a method developed by Homma Munehisa during early 18th century which evolved into the use of candlestick techniques, and is today a main charting tool. In the 1920s and 1930s Richard W. Schabacker published several books which continued the work of Dow and William Peter Hamilton in his books *Stock Market Theory and Practice* and *Technical Market Analysis*. At the end of his life he was joined by his brother in law, Robert D. Edwards who finished his last book. In 1948 Edwards and John Magee published *Technical Analysis of Stock Trends* which is widely considered to be one of the seminal works of the discipline. It is exclusively concerned with trend analysis and chart patterns and remains in use to the present. It is now in its 9th edition. As is obvious, early technical analysis was almost exclusively the analysis of charts, because the processing power of computers was not available for statistical analysis. Charles Dow reportedly originated a form of chart analysis used by technicians—point and figure analysis. Dow Theory is based on the collected writings of Dow Jones co-founder and Editor Charles Dow, and inspired the use and development of modern technical analysis from the end of the 19th century. Other pioneers of analysis techniques include Ralph Nelson Elliott, William Delbert Gann and Richard Wyckoff who developed their respective techniques in the early 20th century. Many more technical tools and theories have been developed and enhanced in recent decades, with an increasing emphasis on computer-assisted techniques.

10.5 DOW THEORY

Dow Theory Originally proposed in the late nineteenth century by Charles H Dow, the editor of Wall Street Journal, the Dow Theory is perhaps the oldest and best-known theory of technical analysis. This theory on stock price movement is a form of technical analysis that includes some aspects of sector rotation. The theory was derived from 255 Wall Street Journal editorials written by Charles H. Dow (1851–1902), journalist, founder and first editor of the Wall Street Journal and co-founder of Dow Jones and Company. Following Dow's death, William Peter Hamilton, Robert Rhea and E. George Schaefer organized and collectively represented 'Dow Theory', based on Dow's editorials. Dow himself never used the term 'Dow Theory', nor presented it as a trading system. The six basic tenets of Dow Theory as summarized by Hamilton, Rhea, and Schaefer are described below.

10.6 BASIC TENETS OF DOW THEORY

1. The market has three movements
 - a. The 'main movement', primary movement or major trend may last from less than a year to several years. It can be bullish or bearish.
 - b. The 'medium swing', secondary reaction or intermediate reaction may last from ten days to three months and generally retraces from 33% to 66% of the primary price change since the previous medium swing or start of the main movement.
 - c. The 'short swing' or minor movement varies with opinion from hours to a month or more. The three movements may be simultaneous, for instance, a daily minor movement in a bearish secondary reaction in a bullish primary movement.
2. Market trends have three phases Dow Theory asserts that major market trends are composed of three phases: an accumulation phase, a public participation phase, and a distribution phase. The accumulation phase (phase 1) is a period when investors 'in the know' are actively buying (selling) stock against the general opinion of the market. During this phase, the stock price does not change much because these investors are in the minority absorbing (releasing) stock that the market at large is supplying (demanding). Eventually, the market catches on to these astute investors and a rapid price change occurs (phase 2). This occurs when trend followers and other technically oriented investors participate. This phase continues until rampant speculation occurs. At this point, the astute investors begin to distribute their holdings to the market (phase 3).
3. The stock market discounts all news Stock prices quickly incorporate new information as soon as it becomes available. Once news is released, stock

prices will change to reflect this new information. On this point, Dow Theory agrees with one of the premises of the efficient market hypothesis.

4. Stock market averages must confirm each other In Dow's time; the US was a growing industrial power. The US had population centers but factories were scattered throughout the country. Factories had to ship their goods to market, usually by rail. Dow's first stock averages were an index of industrial (manufacturing) companies and rail companies. To Dow, a bull market in industrials could not occur unless the railway average rallied as well, usually first. According to this logic, if manufacturers' profits are rising, it follows that they are producing more. If they produce more, then they have to ship more goods to consumers. Hence, if an investor is looking for signs of health in manufacturers, he or she should look at the performance of the companies that ship the output of them to market, the railroads. The two averages should be moving in the same direction. When the performance of the averages diverges, it is a warning that change is in the air. Both Barron's Magazine and the Wall Street Journal still publish the daily performance of the Dow Jones Transportation Index in chart form. The index contains major railroads, shipping companies, and air freight carriers in the US.
5. Trends are confirmed by volume Dow believed that volume confirmed price trends. When prices move on low volume, there could be many different explanations why. An overly aggressive seller could be present for example. But when price movements are accompanied by high volume, Dow believed this represented the 'true' market view. If many participants are active in a particular security, and the price moves significantly in one direction, Dow maintained that this was the direction in which the market anticipated continued movement. To him, it was a signal that a trend is developing.
6. Trends exist until definitive signals prove that they have ended Dow believed that trends existed despite 'market noise'. Markets might temporarily move in the direction opposite to the trend, but they will soon resume the prior move. The trend should be given the benefit of the doubt during these reversals. Determining whether a reversal is the start of a new trend or a temporary movement in the current trend is not easy. Dow Theorists often disagree in this determination. Technical analysis tools attempt to clarify this but they can be interpreted differently by different investors.

Analysis-

There is little academic support for the profitability of the Dow Theory. Alfred Cowles in a study in *Econometric* in 1934 showed that trading based upon the editorial advice would have resulted in earning less than a buy-and-hold strategy using a well-diversified portfolio. Cowles concluded that a buy-and-hold strategy produced 15.5% annualized returns from 1902-1929 while the Dow Theory strategy produced annualized returns of 12%. After numerous studies

supported Cowles over the following years, many academics stopped studying Dow Theory believing Cowles's results were conclusive.

In recent years however, Cowles' conclusions have been revisited. William Goetzmann, Stephen Brown, and Alok Kumar believe that Cowles' study was incomplete and that Dow Theory produces excess risk-adjusted returns. Specifically, the return of a buy-and-hold strategy was higher than that of a Dow Theory portfolio by 2%, but the riskiness and volatility of the Dow Theory portfolio was lower, so that the Dow Theory portfolio produced higher risk-adjusted returns according to their study. Nevertheless, adjusting returns for risk is controversial in the context of the Dow Theory. One key problem with any analysis of Dow Theory is that the editorials of Charles Dow did not contain explicitly defined investing "rules" so some assumptions and interpretations are necessary. Many technical analysts consider Dow Theory's definition of a trend and its insistence on studying price action as the main premises of modern technical analysis.

10.7 TECHNICAL ANALYSIS TECHNIQUES

There are numerous technical indicators that collectively add up to organized confusion. Some of the major technical analysis techniques are described in the following sections.

10.7.1 THE SHORT INTEREST RATIO THEORY

The short interest ratio is derived by dividing the reported short interest or the number of shares sold short, by the average volume for about 30 days. When short sales increase relative to total volume, the indicator rises. A ratio above 150 per cent is considered bullish, and a ratio below 100 per cent is considered bearish.

The logic behind this ratio is that speculators and other investors sell stocks at high prices in anticipation of buying them back at lower prices. Thus, increasing short selling is viewed as a sign of general market weakness, and short covering (as evidenced by decreasing short positions) as a sign of strength. An existing large short interest is considered a sign of strength, since the covers (buyers) are yet to come; whereas an established slight short interest is considered a sign of weakness (more short sales are to come).

10.7.2 CONFIDENCE INDEX

It is the ratio of a group of lower-grade bonds to a group of higher-grade bonds. According to the theory underlying this index, when the ratio is high, investors' confidence is likewise high, as reflected by their purchase of relatively more of the lower- grade securities. When they buy relatively more of the higher grade securities, this is taken as an indication that confidence is low, and is reflected in a low ratio.

10.7.3 SPREADS

Large spreads between yields indicate low confidence and are bearish; the market appears to require a large compensation for business, financial and inflation risks. Small spreads indicate high confidence and are bullish. In short, the larger the spreads, the lower the ratio and the less the confidence. The smaller the spreads, the greater the ratio, indicating greater confidence.

10.7.4 ADVANCE-DECLINE RATIO

The index relating advances to decline is called the advance decline ratio. When advances persistently outnumber decline the ratio increases. A bullish condition is said to exist, and vice versa. Thus, advance decline ratio tries to capture the market's underlying strength by taking into account the number of advancing and declining issues.

10.7.5 MARKET BREADTH INDEX

It is a variant of the advance decline ratio. To compute it, we take the net difference between the number of stocks rising and the number of stocks falling added (or subtracted) to the previous. For example, if in a given week 600 shares advanced, 200 shares declined, and 200 were unchanged, the breadth would be $2[(600-200)/200]$. The figure of each week is added to previous weeks. These data are then plotted to establish the pattern of movement of advances and declines. The purpose of the market breadth index is to indicate whether a confirmation of some index has occurred. If both the stock index and market breadth increase, the market is bullish; when the stock index increases but the breadth index does not, the market is bearish.

10.7.6 THE ODD-LOT RATIO

Odd-lot transactions are measured by odd-lot changes in the index. Odd-lots are stock transactions of less than, say, 100 shares. The odd-lot ratio is sometimes referred to as a yardstick of uniformed sentiment or an index of contrary opinion because the odd-lot theory assumes that small buyers or sellers are not very bright especially at tops and bottoms when they need to be brightest. The odd-lot short ratio theory assumes that the odd-lot short sellers are even more likely to be wrong than odd-lot buyers in general. This indicator relates odd-lot sales to purchases.

10.7.7 INSIDER TRANSACTIONS

The hypothesis that insider activity may be indicative of future stock prices has received some support in the academic literature. Since insiders may have the best picture of how the firm is faring, some believers of technical analysis feel that these inside transactions offer a clue, to future earnings, dividend and stock price performance. If the insiders are selling heavily, it is considered a bearish indicator and vice versa. Stock holders do not like to hear

that the president of a company is selling large blocks of stock of the company. Although the president's reason for selling the stock may not be related to the future growth of the company, it is still considered bearish as investors figure the president, as an insider, must know something bad about the company that they, as outsiders, do not know.

10.7.8 MOVING AVERAGE

It is a smoothed presentation of underlying historical data. Each data point is the arithmetic average of a portion of the previous data. A ten-day moving average measures the average over the previous ten trading days; a twenty-day moving average measures average values over the previous twenty days, and so on. Regardless of the time period used, each day a new observation is included in the calculation and the oldest is dropped, so a constant number of points are always being averaged. Advocates of moving averages in stock selection believe that changes in slope of the line are important. A stock twenty-day moving average line has been trending up might become a candidate for sale if the line turns downward.

10.8 MARKET INDICATOR

A market trend is a putative tendency of a financial market to move in a particular direction over time. These trends are classified as secular for long time frames, primary for medium time frames, and secondary lasting short times. Traders identify market trends using technical analysis, a framework which characterizes market trends as a predictable price response of the market at levels of price support and price resistance, varying over time. The terms bull market and bear market describe upward and downward market trends, respectively, and can be used to describe either the market as a whole or specific sectors and securities.

10.8.1 SECULAR MARKET

A secular market trend is a long-term trend that lasts 5 to 25 years and consists of a series of sequential primary trends. A secular bear market consists of smaller bull markets and larger bear markets; a secular bull market consists of larger bull markets and smaller bear markets.

In a secular bull market the prevailing trend is "bullish" or upward moving. The United States stock market was described as being in a secular bull market from about 1983 to 2000 (or 2007), with brief upsets including the crash of 1987 and the dot-com bust of 2000–2002.

In a secular bear market, the prevailing trend is "bearish" or downward moving.

10.8.2 SECONDARY MARKET TREND

Secondary trends are short-term changes in price direction within a primary trend. The duration is a few weeks or a few months. One type of

secondary market trend is called a market correction. A correction is a short term price decline of 5% to 20% or so. A correction is a downward movement that is not large enough to be a bear market (ex post). Another type of secondary trend is called a bear market rally (or "sucker's rally") which consist of a market price increase of 10% to 20%. A bear market rally is an upward movement that is not large enough to be a bull market (ex post). Bear market rallies occurred in the Dow Jones index after the 1929 stock market crash leading down to the market bottom in 1932, and throughout the late 1960s and early 1970s. The Japanese Nikkei 225 has been typified by a number of bear market rallies since the late 1980s while experiencing an overall long-term downward trend.

10.8.3 PRIMARY MARKET TREND

A primary trend has broad support throughout the entire market (most sectors) and lasts for a year or more.

10.8.4 BULL MARKET

A bull market is associated with increasing investor confidence, and increased investing in anticipation of future price increases (capital gains). A bullish trend in the stock market often begins before the general economy shows clear signs of recovery. It is a win-win situation for the investors.

Examples- India's Bombay Stock Exchange Index, SENSEX, was in a bull market trend for about five years from April 2003 to January 2008 as it increased from 2,900 points to 21,000 points. A notable bull market was in the 1990s and most of the 1980s when the U.S. and many other stock markets rose; the end of this time period sees the dot-com bubble.

10.8.5 BEAR MARKET

A bear market is a general decline in the stock market over a period of time. It is a transition from high investor optimism to widespread investor fear and pessimism. According to The Vanguard Group, "While there's no agreed-upon definition of a bear market, one generally accepted measure is a price decline of 20% or more over at least a two-month period. It is sometimes referred to as "The Heifer Market" due to the paradox with the above subject.

10.8.6 MARKET TOP

A market top (or market high) is usually not a dramatic event. The market has simply reached the highest point that it will, for some time (usually a few years). It is retroactively defined as market participants are not aware of it as it happens. A decline then follows, usually gradually at first and later with more rapidity. William J. O'Neil and company report that since the 1950s a market top is characterized by three to five distribution days in a major market index occurring within a relatively short period of time. Distribution is a decline in price with higher volume than the preceding session.

10.8.7 MARKET BOTTOM

A market bottom is a trend reversal, the end of a market downturn, and precedes the beginning of an upward moving trend (bull market). It is very difficult to identify a bottom (referred to by investors as "bottom picking") while it is occurring. The upturn following a decline is often short-lived and prices might resume their decline. This would bring a loss for the investor who purchased stock(s) during a misperceived or "false" market bottom. Baron Rothschild is said to have advised that the best time to buy is when there is "blood in the streets", i.e., when the markets have fallen drastically and investor sentiment is extremely negative.

10.8.8 INVESTOR SENTIMENT

Investor sentiment is a contrarian stock market indicator. By definition, the market balances buyers and sellers, so it's impossible to literally have 'more buyers than sellers' or vice versa, although that is a common expression. The market comprises investors and traders. The investors may own a stock for many years; traders put on a position for several weeks down to seconds. Generally, the investors follow a buy low sell high strategy. Traders attempt to "fade" the investors' actions (buy when they are selling, sell when they are buying). A surge in demand from investors lifts the traders' asks, while a surge in supply hits the traders' bids. When a high proportion of investors express a bearish (negative) sentiment, some analysts consider it to be a strong signal that a market bottom may be near. The predictive capability of such a signal (see also market sentiment) is thought to be highest when investor sentiment reaches extreme values. Indicators that measure investor sentiment may include:

Investor Intelligence Sentiment Index: If the Bull-Bear spread (% of Bulls - % of Bears) is close to a historic low, it may signal a bottom. Typically, the number of bears surveyed would exceed the number of bulls. However, if the number of bulls is at an extreme high and the number of bears is at an extreme low, historically, a market top may have occurred or is close to occurring. This contrarian measure is more reliable for its coincidental timing at market lows than tops.

10.8.9 MARKET CAPITULATION

Market capitulation refers to the threshold reached after a severe fall in the market, when large numbers of investors can no longer tolerate the financial losses incurred. These investors then capitulate (give up) and sell in panic, or find that their pre-set sell stops have been triggered, thereby automatically liquidating their holdings in a given stock. This may trigger a further decline in the stock's price, if not already anticipated by the market. Margin calls and mutual fund and hedge fund redemptions significantly contribute to capitulations. The contrarians consider a capitulation a sign of a possible bottom in prices. This is because almost everyone who wanted (or was forced) to sell stock has already done so,

leaving the buyers in the market, and they are expected to drive the prices up. The peak in volume may precede an actual bottom.

10.8.10 CHANGES WITH CONSUMER BEHAVIOR

Market trends are fluctuated on the demographics and technology. In a micro economical view, the current state of consumer trust in spending will vary the circulation of currency. In a micro economical view, demographics within a market will change the advancement of businesses and companies. With the introduction of the internet, consumers have access to different vendors as well as substitute products and services changing the direction of which a market will go. Despite that it is believed that market trends follow one direction over a matter of time, there are many different factors that change can change this idea. Technology s-curves, explained in the book *The Innovator's Dilemma*, states that technology will start slow then increase in users once better understood but level off once another technology replaces it, proving that change in the market is actually consistent.

10.8.11 ETYMOLOGY

The precise origin of the phrases "bull market" and "bear market" are obscure. The Oxford English Dictionary cites an 1891 use of the term "bull market". In French "bull speculative" refers to a speculative market bubble. The Online Etymology Dictionary relates the word "bull" to "inflate, swell", and dates its stock market connotation to 1714. One hypothetical etymology points to London bearskin "jobbers" (market makers), who would sell bearskins before the bears had actually been caught in contradiction of the proverb *ne vendez pas la peau de l'ours avant de l'avoir tue* ("don't sell the bearskin before you've killed the bear")—an admonition against over-optimism. By the time of the South Sea Bubble of 1721, the bear was also associated with short selling; jobbers would sell bearskins they did not own in anticipation of falling prices, which would enable them to buy them later for an additional profit.

Another plausible origin is from the word "bulla" which means bill, or contract. When a market is rising, holders of contracts for future delivery of a commodity see the value of their contract increase. However in a falling market, the counterparties—the "bearers" of the commodity to be delivered—win because they have locked in a future delivery price that is higher than the current price. Some analogies that have been used as mnemonic devices:

- Bull is short for 'bully', in its now mostly obsolete meaning of 'excellent'.
- It relates to the common use of these animals in blood sport, i.e. bear-baiting and bull-baiting.
- It refers to the way that the animals attack: a bull attacks upwards with its horns, while a bear swipes downwards with its paws.
- It relates to the speed of the animals: bulls usually charge at very high speed whereas bears normally are thought of as lazy and cautious

movers—a misconception because a bear, under the right conditions, can outrun a horse.

- They were originally used in reference to two old merchant banking families, the Barings and the Bulstrodes.
- Bears hibernate, while bulls do not.
- The word "bull" plays off the market's returns being "full" whereas "bear" alludes to the market's returns being "bare".

In describing financial market behavior, the largest group of market participants is often referred to, metaphorically, as the herd. This is especially relevant to participants in bull markets since bulls are herding animals. A bull market is also sometimes described as a bull run. Dow Theory attempts to describe the character of these market movements. International sculpture team Mark and Diane Weisbeck were chosen to re-design Wall Street's Bull Market. Their winning sculpture, the "Bull Market Rocket" was chosen as the modern, 21st century symbol of the up-trending Bull Market.

10.9 LIMITATION OF TECHNICAL ANALYSIS

These are the following limitation of this analysis:

1. Most technical analysts are not able to offer convincing explanations for the tools employed by them.
2. Empirical evidence in support of the random-walk hypothesis casts its shadow over the usefulness of technical analysis.
3. By the time an uptrend or downtrend may have been signaled by technical analysis, it may already have taken place.
4. Ultimately, technical analysis must be self-defeating proposition. As more and more people employ it, the value of such analysis tends to decline.
5. The numerous claims that have been made for different chart patterns are simply untested assertions.
6. There is a great deal of ambiguity in the identification of configurations as well as trend lines and channels on the charts. The same chart can be interpreted differently.

10.10 SUMMARY

As an approach to investment analysis, technical analysis is radically different from fundamental analysis. Technical analysts don't evaluate a large number of fundamental factors relating to the company, the industry, and the economy. Instead they analyze market generated data like prices and volumes to determine the future direction of price movement. The technical analysts believe that their method was simple and give an investor a bird's eye on the future of security price by measuring the past moves of prices. The technical analysts

predicted price behavior through line charts, bar charts and point and figure charts. They have a large number of patterns which predict the upward and downward swing in the market. There are a large number of theories which also predict the future of prices. The basic premises of technical analysis are:

1. The market value of the scrip is determined by the interaction of demand and supply.
2. Supply and demand is governed by numerous factors, both rational and irrational.
3. The market discounts everything.
4. The market always moves in the trends except for minor deviations.
5. It is known fact that history repeats itself. It is true to stock market also and the market technicians assume that past prices predict the future.
6. As the market always moves in trends, analysis of past market data can be used to predict future price behavior.

Technical analysts use a variety of tools to predict the market. Among them, important are Dow Theory, charts, moving average, short selling, odd lot theory, Relative strength analysis, volume of trade, breadth of the market etc. technical analysis appears to be highly controversial approach to security analysis having severe critics. In a rational, well-ordered and efficient market, technical analysis is a worthless exercise. However, given the imperfections, inefficiencies and irrationalities that characterize the real world market, technical analysis can be helpful to earn abnormal return in the market.

10.11 SELF ASSESSMENT QUESTIONS

- Q.1.** Technical analysts believe that one can use past price changes to predict future price changes. How do they justify this belief?
- Q.2.** Distinguish between fundamental analysis and technical analysis.
- Q.3.** Discuss the Dow Theory and its Basic Tenets.
- Q.4.** Write short notes on
 - Short Selling
 - Relative Strength Analysis
- Q.5.** Explain in detail the Dow Theory and how is it used to determine the direction of stock market?
- Q.6.** Describe the Odd Lot Theory in brief.
- Q.7.** What do you mean by Technical Analysis? And describe Technical Analysis Techniques in brief.
- Q.8.** Discuss the Market Indicator in brief.

10.12 TEXT AND REFERENCES

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UNIT-11 EFFICIENT MARKET HYPOTHESIS

UNIT FRAMEWORK

- 11.1 Purpose
- 11.2 Introduction
- 11.3 Definitions/Meaning of Market Efficiency
- 11.4 Forms of Market Efficiency
- 11.5 Empirical Tests of EMH
 - 11.5.1 Tests of Weak Form
 - 11.5.2 Tests of Semi Strong Form
 - 11.5.3 Tests of Strong Form
- 11.6 Anomalies in EMH
- 11.7 Indian Studies on Market Efficiency
- 11.8 Implications of EMH for Security Analysis
- 11.9 Implications of EMH for Portfolio Management
- 11.10 Summary
- 11.11 Self-Assessment Questions
- 11.12 Text and References

11.1 PURPOSE

The objectives of this unit are:

- To explain the concept of market efficiency and various form of market efficiency
- To explain the various empirical tests of market efficiency
- To describe the anomalies in efficient market hypothesis and the Indian studies on market efficiency

- To discuss the implications of efficient market hypothesis for security analysis and portfolio management

11.2 INTRODUCTION

In the last three units, we have talked about two distinct methodologies specifically, the Fundamental Analysis and the Technical Analysis that are utilized by the investors in taking venture choices. These methodologies were utilized under the suspicion that the present market costs are not the same as its natural esteem and such investigations will help speculators in finding under-estimated and over-evaluated stocks. The legitimacy of the suspicion that the market cost isn't equivalent to the characteristic esteem is sketchy. The third methodology, called 'Efficient Market Hypothesis', depends on the preface that present market cost is a genuine impression of the estimation of the securities (stocks) and consequently it is worthless to expect that key or specialized investigation will yield a predominant return by recognizing under-evaluated or over-valued stocks. Under productive market speculation, financial specialists can expect an arrival comparable with the hazard related with such ventures. Efficient market theory states that the price fluctuations are random and do not follow any regular pattern. It means that the price can deviate from the intrinsic value but the deviations are random and correlated with any observable variable. If the deviations of market price from intrinsic value are random, it is not possible to consistently identify over or under-valued securities. In this Unit, you will get presented with the ideas and forms of market efficiency, some empirical test of EMH and furthermore the anomalies in EMH. Endeavors have additionally been put to illuminate you on a portion of the Indian investigations on market efficiency and to a specific degree on the implication of EMH for security analysis and portfolio management.

11.3 DEFINITIONS/MEANING OF MARKET EFFICIENCY

Efficient market theory states that the price fluctuations are random and do not follow any regular pattern. It is a central idea of a modern finance that has profound implications. An understanding of the efficient market hypothesis will help to ask the right questions and save from a lot of confusion that dominates popular thinking in finance. An efficient market is one in which the market price of a security is an unbiased estimate of its intrinsic value. Note that market efficiency does not imply that the market price equals intrinsic value at every point in time. All that it says is that the errors in the market prices are unbiased. It means that the price can deviate from the intrinsic value but the deviations are random and correlated with any observable variable. If the deviations of market price from intrinsic value are random, it is not possible to consistently identify over or under-valued securities. Market efficiency is defined in relation to information that is reflected in security prices. In an efficient market, all the relevant information is reflected in the current stock price. Information cannot be used to obtain excess return: the information has already been taken into account and absorbed in the prices.

11.4 FORMS OF MARKET EFFICIENCY

Eugene Fama suggested that three levels of market efficiency. They are:

- (1) Weak-form efficiency
- (2) Semi-strong form efficiency
- (3) Strong form efficiency

11.4.1 WEAK-FORM EFFICIENCY

The weak form of market holds that present stock market prices reflect all known information with respect to past stock prices, trends, and volumes. In the weak form of the market no investor can use any information of the past to earn a return of portfolio which is in excess of the portfolio's risk. This means that the investor who develops the strategy based on past prices and chooses his portfolio on that basis cannot continuously outperform another investor who 'buys and holds' his investments over a long term period. The question which has rapidly been studied is whether "security prices follow a random walk." A random walk when it is applied to security prices means that all price changes which have occurred today are completely independent of the prices prior to this day in all respects. The weak form of the efficient market theory takes into consideration only the average change of today's prices and states that they are independent of all prior prices. The evidence supporting the random walk behavior also supports the efficient market hypothesis and states that the large price changes are followed by larger price changes, but they do not change in any direction which can be predicated. This observation in a way violates the random walk behavior that it does not violate the weak form of the market efficiency. The weak form hypothesis says that the current prices of stocks already fully reflect all the information that is contained in the historical sequence of prices. Therefore, there is no benefit in examining the historical sequence of prices forecasting the future. This weak form is also known as the random-walk theory.

11.4.2 SEMI-STRONG FORM OF EMH

The semi strong form of the efficient market hypothesis centers on how rapidly and efficiently market prices adjust to new publicly available information. In this state, the market reflects even those forms of information which may be concerning the announcement of a firm's most recent earnings forecast and adjustments which will have taken place in the prices of security. It says that current prices of stocks not only reflect all informational content of historical prices but also reflect all publicly available knowledge about the corporations being studied. The investor in the semi-strong form of the market will find it impossible to earn a return on the portfolio which is based on the publicly available information in excess of the return which may be said to be commensurate with the portfolio risk. Many empirical studies have been made on the semi-strong form of the efficient market hypothesis to study the reaction of security prices to various types of information around the announcement time of the information.

11.4.3 STRONG-FORM OF EMH

The strong-form efficient market hypothesis holds that all available information, public or private, is reflected in the stock prices. The strong form is concerned with whether or not certain individuals or groups of individuals possess inside information which can be used to make above average profits. If the strong form of the efficient capital market hypothesis holds, then and day is as good as any other day to buy any stock. This the most extreme form of the efficient market hypothesis. Mostly research work has indicated that the efficient market hypothesis in the strongest form does not hold good.

11.5 EMPIRICAL TESTS OF EMH

Empirical tests of the weak form

Over the years an impressive literature has been developed describing empirical tests of random walk (Paul H. Cootner, 1967). This research has been aimed at testing whether successive or lagged price changes are independent. In this section we will review briefly some of the major categories of statistical techniques that have been employed in this research, and we will summarize their major conclusions.

These techniques generally fall into two categories: those that test for trends in stock prices and thus infer whether profitable trading systems could be developed and those that test such mechanical systems directly. Although certain of these studies were conducted many years ago, they are the basis upon which research on the efficient-market theory has been based, and are included here to provide the necessary conceptual basis for the theory and its evolution.

Empirical tests of the semi strong form

We have learnt that the semi strong form says that current stock prices will instantaneously reflect all publicly available information. The tests that will be summarized briefly in this section test whether in fact all publicly available information and news announcements, such as quarterly earnings reports, changes in accounting information, stocks splits, stock dividends, and the like, are quickly and adequately reflected in stock prices. Furthermore, these tests attempt to analyze if an analyst using such data when they become available to him can successfully use this information to obtain superior investment results. Fama, Fisher, Jensen, and Roll made a major contribution with their study of the semi strong-form hypothesis (Eugene F. Fama, 1969). They tested the speed of the market's reaction to a firm's announcement of a stock split and the accompanying information with respect to a change in dividend policy. The authors concluded that the market was efficient with respect to its reaction to information on the stock split and also was efficient with respect to reacting to the informational content of stock splits vis-à-vis changes in dividend policy.

Ball and Brown conducted another test in this area by analyzing the stock market's ability to absorb the informational content of reported annual earnings per share information. In their study the authors examined stock price movements

of companies that experience ‘good’ earnings reports as opposed to the stock price movements of companies that experienced ‘bad’ earnings reports. A ‘good’ earnings report was a reported earnings per share figure that was higher than the previously forecast earnings per share, and conversely a ‘bad’ earnings report was a reported earnings per share figure that was lower than had been forecast previously. They found that those companies with ‘good’ earnings reports experienced price increases in their stock and those with ‘bad’ earnings reports experienced stock price declines. The interesting result was that about 85 per cent of the informational content of the annual earnings announcement was reflected in stock price movements prior to the release of the actual annual earnings figure (Ray Ball and Philip Brown, 1968). Joy, Litzenberger, and McEnally conducted another stock price earnings report test in this area. In their study the authors tested the impact of quarterly earnings announcements on the stock price adjustment mechanism. Some of their results somewhat contradicted the semi strong form of the efficient-market hypothesis. In some of their subtests, the authors found that favourable information contained in published quarterly earnings reports was not instantaneously reflected in stock prices (O. Maurice Joy *et al.*, 1977). Basu also conducted a test of the semi strong form (S. Basu, 1977). In his study, Basu tested for the informational content of the price-earnings multiple. He tested to see whether low P/E stocks tended to outperform stocks with high P/E ratios. If historical P/E ratios provided useful information to investors in obtaining superior stock market returns, this would be a refutation of the semi strong form of the efficient market hypothesis. Because if historical publicly available P/E information led an investor to buy a particular type of stock and this in turn led to abnormal returns, this would be a direct contradiction of the semi strong form. His results indicated that the low P/E portfolios experienced superior returns relative to the market and high P/E portfolios performed in an inferior manner relative to the overall market. A similar anomaly to the semi strong form of the efficient-markets hypothesis-namely, the size effect was also tested by researchers. These studies attempt to test whether smaller firms tended to experience larger returns than the larger firms experienced over the same time period. These studies indicated that small firms did provide the investor with significantly larger risk-adjusted returns than did the larger firms examined. However, other researchers have pointed out that this apparent anomaly results more from inappropriate risk measurements, the amount of attention analysts pay to the securities, volume of trading, frequency of trading, and transaction costs, rather than the size differential alone. By way of summary, of the semi strong efficient tests, we have reviewed here, the great majority provide strong empirical support for the hypothesis; however, there have been some notable exceptions to this support. Most of the reported results demonstrate that stock prices do adjust rapidly to announcements of new information about stocks. Some of the studies indicate further that investors are typically unable to utilize this information to earn consistently above average returns.

11.5.1 TESTS OF WEAK FORM

Three types of tests have been commonly employed to empirically verify the weak-form efficient market hypothesis: (1) serial correlation tests; (2) runs tests; and (3) filter rules tests.

11.5.1.1 SERIAL CORRELATION TEST

Serial Correlation is said to measure the association of a series of numbers which are separated by some constant time period. One way to test for randomness in stock price changes is to look at their serial correlations. Is the price change in one period correlated with the price change in some other period? If such auto-correlations are negligible, the price changes are considered to be serially independent. Numerous serial correlation studies, employing different stocks, different time-lags, and different time-periods, have been conducted to detect serial correlations. In general, these studies have failed to discover any significant serial correlations. Moore measured correlation of the price change of one week with the price change of the next week with the price change of the next week. His research showed average serial correlation of -0.06 which indicated a very low tendency of security price to reverse dates. This means that a price rise did not show the tendency to follow the price fall or vice versa. Fama also tested the serial correlation of daily price changes in 1965. He studied the correlation for 30 firms which composed of the Dow Jones Industrial Averages for five years before 1962. His study showed an average correlation of -0.03. This correlation was also weak because it was not very far away from zero.

11.5.1.2 RUN TEST

Run Test was also made by Fama to find out if price changes were likely to be followed by further price changes of the same sign. Run Test ignored the absolute values of numbers in the series and took into the research only the positive and negative signs. Given a series of stock price changes, each price (+) indicates it represents an increase or a minus (-) if it represents a decrease. A run occurs when there is not difference between the sign of two changes. When the sign of change differs, the run ends and a new run begins. To test a series of price changes for independence, the number of runs in that series is compared to see whether it is statistically different from the number of runs in a purely random series of the same size. Many studies have been carried out, employing the runs test of independence. They did not detect any significant relationship between the returns of security in one period and the returns in prior periods and made a conclusion that the security prices followed a random walk.

11.5.1.3 FILTER RULES TEST

The use of charts is essentially a technique for filtering out the important information from the unimportant. Alexander and Fama and Blume took the idea that price and volume data are supposed to tell the entire story we need to know to identify the important action in stock prices. They applied filter rules to see how well price changes pick up both trends and reverses – which chartists claim their charts do. If a stock moves up X per cent, buy it and hold it long; if it then reverses itself by the same percentage, sell it and take a short position in it. When the stock reverses itself again by X per cent cover the short position and buy the stock long. The size of the filter varied from 0.5 to 50 percent. The results showed that the larger filter did not work well. The smaller ones worked better, since they

were more sensitive to market swings. However, when trading costs are included in the analysis, no filter worked well. In fact, substantial losses would have been incurred using these filter rules. In essence the result of using the filter technique turn out to be that stock prices do not have momentum from which one can make returns in excess of those warranted by the level of risk assumed. In fact, because of trading costs, we would have been substantially better off buying a random set of stocks and holding them during the same trading period.

11.5.2 TESTS OF SEMI STRONG FORM

Two studies commonly employed to test semi-strong form efficient market are event study and portfolio study.

11.5.2.1 EVENT STUDY

It examines the market reactions to and the excess market returns around a specific information event like acquisition announcement or stock split. The key steps involved in an event study are as follows:

1. Identify the event to be studied and pinpoint the date on which the event was announced.
2. Collect returns data around the announcement date. In this context two issues have to be resolved: What should be the period for calculating returns – weekly, daily, or some other interval? For how many periods should returns be calculated before and after the announcement date?
3. Calculate the excess returns, by period, around the announcement date for each firm in the sample. The excess return is calculated by making adjustment for market performance and risk.
4. Compute the average and the standard error of excess returns across all firms
5. Assess whether the excess returns around the announcement date are different from zero. To determine whether the excess returns around the announcement date are different from zero, estimate the T statistic for each day.

The results of event studies are mixed. Most event studies support the semi-strong form efficient market hypothesis. Several event studies, however, have cast their shadow over the validity of the semi strong form efficient markets theory.

11.5.2.2 PORTFOLIO STUDY

In a portfolio study, a portfolio of stocks having the observable characteristic (low price earnings ratio or whatever) is created and tracked over time see whether it earns superior risk-adjusted returns. Steps involved in a portfolio study are as follows:

1. Define the variable (characteristic) on which firms will be classified. The proposed investment strategy spells out the relevant variable. The variable must be observable, but not necessarily numerical.
2. Classify firms into portfolios based upon the magnitude of the variable. Collect data on the variable for every firm in the defined universe at the beginning of the period and use that information for classifying firms into different portfolios.
3. Compute the returns for each portfolio on the returns for each firm in each portfolio for the testing period and calculate the return for each portfolio, assuming that the stocks included in the portfolio are equally weighted.
4. Calculate the excess returns for each portfolio. The calculation of excess returns earned by a portfolio calls for estimating the portfolio beta and determining the excess returns
5. Assess whether the average excess returns are different across the portfolios. Several statistical tests are available to test whether the average excess returns differ across these portfolios. Some of these tests are parametric and some nonparametric.

Many portfolio studies suggest that it is not possible to earn superior risk adjusted returns by trading on some observable characteristics. However, several portfolio studies have documented inefficiencies and anomalies.

11.5.3 TESTS OF STRONG FORM

The semi strong form of the efficient-market hypothesis could only be tested indirectly- namely, by testing what happened to prices on days surrounding announcements of various types, such as earnings announcements, dividend announcements, and stock-split announcements. To test the strong form of efficient-market hypothesis, even more indirect methods must be used. For the strong form, as has already been mentioned, says that no information is useful. This implies that not even security analysts and portfolio managers who have access to information more quickly than the general investing public are able to use this information to earn superior returns. Therefore, many of the tests of the strong form of the efficient market hypothesis deal with tests of mutual-fund performance.

11.6 ANOMALIES IN EMH

Anomalies are situations that appear to violate the traditional view of market efficiency, suggesting that it may be possible for careful investors to earn abnormal returns. Some stock market anomalies are Low Price-Earnings Ratio: Stock that are selling at price earnings ratios that are low relative to the market Low Price-Sales Ratio: Stocks that have price-to-sales ratios that are lower competed with other stocks in the same industry or with the overall market Low Price-to Book value Ratio: Stocks whose stock prices are less that their respective book values High Dividend Yield: Stocks that pay high dividends relative to their

respective share prices
Small companies: Stock of companies whose market capitalization is less than 100 million
Neglected Stocks: Stocks followed by only a few analysts and/or stocks with low percentages of institutional ownership
Stocks with High Relative Strength: Stocks whose prices have risen faster relative to the overall market
January Effect: Stock does better during January than during any other month of the year
Day of the Week: Stock of poorer during Monday than during other days of the week.

Securities markets are overwhelmed with a huge number of smart, generously compensated, and accomplished financial specialists looking for under and over-esteemed securities to purchase and move. The more members and the quicker the scattering of data, the more productive a market ought to be. The discussion about efficient markets has brought about a great many observational examinations endeavoring to decide if explicit markets are in actuality "effective" and if so to what degree. Numerous learner investors are shocked to discover that a huge measure of proof backings the productive market theory. Early trial of the EMH concentrated on specialized examination and it is chartists whose extremely presence appears to be most tested by the EMH. Also, truth be told, by far most of investigations of specialized hypotheses have observed the procedures to be totally futile in anticipating securities costs. In any case, specialists have archived some technical anomalies that may offer some desire for experts, despite the fact that exchange expenses may lessen or dispense with the preferred standpoint.

A. Technical Anomalies

An inquiry that has been liable to broad research and discussion is whether past costs and outlines can be utilized to anticipate future costs. "Specialized Analysis" is a general term for various contributing strategies that endeavor to gauge securities costs by concentrate past costs and related measurements. Regular systems incorporate techniques dependent on relative quality, moving midpoints, as well as help and opposition.. The lion's share of scientists that have tried specialized exchanging frameworks (and the feeble shape effective market speculation) have discovered that costs change quickly to securities exchange data and that specialized examination methods are not prone to give any preferred standpoint to financial specialists who use them. Anyway others contend that there is legitimacy to some specialized methodologies. Specifically, a portion from the 6th release of Malkiel's book goes this way - "The focal suggestion of outlining is completely false, and financial specialists who pursue its statutes will achieve only expanding considerably the business charges they pay. There has been a striking consistency in the finishes of concentrates done on all types of specialized investigation. Not one has reliably beaten the fake treatment of a purchase and-hold methodology." In fact, numerous anomalies that have been documented via back testing have subsequently disappeared or proven to be impossible to exploit because of transactions costs.

B. Stock Market Anomalies

It includes:

(i) Fundamental Anomalies

Esteem contributing is presumably the most exposed irregularity of the key peculiarities and is every now and again touted as the best system for contributing. There is a huge assortment of proof archiving the way that generally, financial specialists erroneously overestimate the possibilities of development organizations and think little of significant worth organizations. S. Basu in an all-around looked into article tried for the enlightening substance of the value profit numerous. His examination asked into whether low value profit different would in general beat stocks with high P/E proportions. His examination shows that low P/E portfolio experienced better returns relative than the market.

(ii) Calendar Anomalies

It includes:

January Effect: According to Robert Haugen and Philippe Jorion, "The January impact is, maybe the best-known case of odd conduct in security advertises all through the world." The January Effect is especially interesting in light of the fact that it doesn't give off an impression of being lessening regardless of being notable and promoted for about two decades. Hypothetically an inconsistency ought to vanish as dealers endeavor to exploit it ahead of time. Most importantly January has generally been the greatest month to be put resources into stocks.

The impact is typically ascribed to little stocks bouncing back after year-end impose moving. Singular stocks discouraged close year-end are bound to be sold for expense misfortune acknowledgment while stocks that have kept running up are regularly held until after the New Year. Many trust the January impact has moved into November and December because of shared assets being required to report property toward the finish of October and from financial specialists purchasing fully expecting additions in January. A few investigations of remote nations have discovered that profits in January were more prominent than the normal return for the entire year. Curiously, the January impact has likewise been seen in numerous remote nations including a few (Great Britain and Australia) that don't utilize December 31 as the assessment year-end. This infers there is something else entirely to the January impact than simply assess impacts. Experimental examination has likewise settled that more than one-portion of the little firm impact happens in January and the vast majority of the anomalous return related with January happens amid the initial 5 days of exchanging.

Turn of the Month Effect: Stocks reliably indicate higher profits for the most recent day and initial four days of the month. Chris R. Hensel and William T. Ziemba introduced the hypothesis that the impact results from money streams toward the month's end (compensations, premium installments, and so on.). The creators discovered returns for the turn of the month were essentially better than expected from 1928 through 1993 and "that the all-out come back from the S&P 500 over this sixty-five-year time frame was gotten for the most part amid the turn of the month." The examination suggests that financial specialists making normal buys may profit by planning to make those buys proceeding the turn of the month.

The Monday Effect: Monday will in general be the most exceedingly awful day to be put resources into stocks. The primary examination recording an end of the week impact was by M. J. Fields in 1931 in the Journal of Business when stocks

exchanged on Saturdays. Fields had likewise found in a recent report that the DJIA usually propelled the day preceding occasions. A few examinations have demonstrated that profits on Monday are more terrible than different days of the week. Strangely, Lawrence Harris has considered intraday exchanging and discovered that the end of the week impact will in general happen in the initial 45 minutes of exchanging as costs fall however on all different days costs ascend amid the initial 45 minutes. This abnormality introduces the fascinating inquiry: Could the impact be caused by the mind-sets of market members? Individuals are for the most part in better states of mind on Fridays and before occasions, yet are commonly grouchy on Mondays (truth be told, suicides are more typical on Monday than on some other day). Financial specialists ought to be that as it may, remember that the thing that matters is little and for all intents and purposes difficult to exploit in light of exchanging costs.

C. Other Anomalies

The Size Effect: Some examinations have appeared little firms (capitalization or resources) will in general beat. The little stock influence was first archived by Rolf W. Banz. He partitioned the stocks on the NYSE into quintiles dependent on market capitalization. The profits from 1926 to 1980 for the littlest quintile beat alternate quintiles and different lists. Others have contended that it is 'not estimate that issues, it is the consideration and the quantity of investigators that pursue the stock.

Announcement Based Effect: value changes will in general persevere after beginning declarations. Stocks with positive amazements will in general float upward; those with negative astonishments will in general float descending. Some allude to the probability of positive profit shocks to be trailed by a few more income amazes as the "cockroach" hypothesis since when you discover one, there are probably going to be more secluded from everything. Robert Haugen in his book *The New Finance: The Case against Efficient Markets* contended that the proof infers speculators at first disparage firms indicating solid execution and afterward go overboard. Haugen presumed that "The market goes overboard with a slack" and that "we clearly have a market that is ease back to blow up."

Insider Transactions: There have been numerous examinations that have archived a connection between exchanges by administrators and chiefs in their company's stock and the stock's execution. Insider purchasing by more than one insider is considered by numerous individuals to be a flag that the insiders trust the stock is altogether underestimated and their conviction that the stock will beat as needs be later on. Notwithstanding, numerous scientists question whether the additions are critical and whether they will happen later on.

11.7 INDIAN STUDIES ON MARKET EFFICIENCY

There have been various exact investigations on testing the distinctive types of market productivity in the created markets. Despite the fact that the exact work isn't practically identical to the amount of work in the created markets, Indian writing on this is anything but an ignored subject. For example an examination on feeble type of productivity by Ramasastry (2001) tried the

effectiveness of the Indian capital market for the period from 1996 through 1998 utilizing an amazing method called the Spectral Analysis. According to his discoveries, autocorrelation for various slacks were observed to be factually irrelevant. Further correlogram, in view of Sensex, set up that Indian securities exchange has been productive. Unearthly examination uncovered that there is a nearness of occasional cycles in the development of offer costs. However affirms advertise productivity as power work straightens at higher frequencies. Different investigations that approved the Weak type of effectiveness incorporate Studies by SK Barua (1980), OP Gupta (1985) and YB Yalawar (1985) Abhijit Dutta (2001) tried the semi-solid type of market proficiency. He endeavored to break down the conduct of Indian individual financial specialist's response to the great and awful news and their impact on money markets. The measurable inductions depended on three central points in particular, the individual financial specialists trust in the market, Indian people response to the market and their portfolio choice. The discoveries uncovered that the Indian people have high trust in them and are not guided by the market limited topsy-turvy data. In any case, since their number is less, their impact isn't felt. An investigation by Rao and Nageshwara (1997) on the BSE record demonstrates those showcase respond to totality and explicitly controlled costs respond the keenest in the unique situation. Correspondingly Arora and Natarajan (1997) reasoned that on the off chance that harmony with respect to speculation must be achieved, need assignments in the midst of the objectives are to be somewhat disheartened. Maiti (1997) had watched the different parts of shareholding design and reasoned that institutional financial specialists demonstrated faithfulness to blue chip organizations prompting an asymmetry in market data as respects interest in stocks. J Ramachandran had examined the effect of extra issues on offer costs and observed the market to be productive in semi-solid form. Other Indian Studies by Desai M (1965), Ojha PR (1976), Prasanna Chandra (1975) and Ramachandran G (1989) demonstrated the profits impact share value conduct. There has been no exact investigation approving the solid type of EMH in India.

11.8 IMPLICATIONS OF EMH FOR SECURITY ANALYSIS

There are three reasons why security examination stays applicable even in a for the most part productive market. In a productive yet not exactly consummate market, there is a period slack between the landing of data and its resulting appearance in cost. Amid the interim, security examination gives a chance to modify portfolios gainfully. Such rewards are caught by institutional financial specialists, who have the ability to process a lot of information rapidly and effectively. Rivalry of data, which guarantees advertise productivity, constrains the chance to gain better than expected return. The real capacity of security investigation is to find data before contenders get it. Security analysis is basic to the venture procedure even on account of immediate value reaction. Right evaluating of benefits in an effective market (however not exactly impeccable) does not suggest speculators' aloofness to the selection of advantages held in a portfolio. As cost of security reacts to new data, reflecting change in risk and

returns, portfolio alteration happens. Security analysis and portfolio the board are complimentary to a productive capital market.

11.9 IMPLICATIONS OF EMH FOR PORTFOLIO MANAGEMENT

The portfolio management process begins with an investment policy statement, including an investor's objectives and constraints. Given EMH, the portfolio management process should thus, not focus on achieving above-average returns for the investor. The portfolio management process should focus purely on risks given that above average returns are not achievable. A portfolio manager's goal is to outperform a specific benchmark with specific investment ideas. The EMH implies that this goal is unachievable.

There could be two imperative ramifications of EMH for portfolio determination. These are:

1. Even basic irregular determination prompts portfolio, which approximates the market intently when 15-20 stocks are held.
2. Index Funds are an outgrowth of the expanding mindfulness and affirmation of market proficiency.

Nobel Laureate William Sharpe makes a straightforward yet incredible body of evidence against dynamic administration in his article 'The Arithmetic of Active Management': "If dynamic and aloof administration styles are characterized in reasonable ways, the reality of the situation must prove that: (1) preceding costs, the arrival on the normal effectively overseen dollar will rise to the arrival on the normal latently overseen dollar; and (2) after costs, the arrival on the normal effectively overseen dollar will be not exactly the arrival on the normal inactively overseen dollar These declarations will hold for whenever period".

Yearning financial specialists and speculation supervisors practically all need to beat the market, however it merits inquiring as to for what reason should they need to beat it for you. For what reason should valuable experiences into the idea of the market be accessible available to be purchased to the overall population, either straightforwardly through a store or by implication, maybe through a book pushing a specific speculation procedure as the course to out-execution? On the off chance that a speculation procedure is so great, it would appear to bode well to remain quiet about its insider facts.

11.10 SUMMARY

In this Unit, we have talked about different elements of the theory that the stock market are proficient. We have featured the idea and types of market efficiency viz., weak form, semi-strong form and strong form. We have likewise portrayed different empirical tests of EMH. Indian examinations on market efficiency are quickly demonstrated and the peculiarities in EMH are called attention to the unit closes by featuring the ramifications of EMH for security

analysis and portfolio management, "Contributing by dash" can at present not be suggested as unrivaled value speculation technique with regards to the vast majority of the securities analysis of the world. The majority of the world stock exchanges is still not exactly productive and holds scope for unusual returns by following dynamic security analysis and portfolio management.

11.11 SELF ASSESSMENT QUESTIONS

- Q.1. Define the term 'capital markets are efficient'? And why capital market should be efficient?
- Q.2. What is market efficiency?
- Q.3. Describe the differences in different forms of market efficiency.
- Q.4. Describe the various tests of the weak form of EMH.
- Q.5. What are the implications of EMH for security analysis?
- Q.6. What are some of the anomalies in efficient market hypothesis?
- Q.7. What are the implications of EMH for portfolio management?
- Q.8. Describe the Empirical Tests of EMH.

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॥ सरस्वती नः सुभगा मयस्करत् ॥

Uttar Pradesh Rajarshi Tandon
Open University

M.Com-403

Security Analysis and Portfolio Management

BLOCK

4

PROTFOLIO MANAGEMENT AND CAPITAL MARKET

UNIT-12

Conceptual Framework

UNIT-13

Portfolio Selection

UNIT-14

Capital Market Theory

UNIT-15

Portfolio Revision

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BLOCK INTRODUCTION

In Block 4 you will learn about all the segments related to portfolio management. Besides this you will get full insight into capital market too.

Unit 12 will give you a thorough knowledge about portfolio analysis, inputs to portfolio analysis, return and risk characteristics of Individual Assets, Expected Return and Risk of a Portfolio Diversification, Selection Portfolio, Selection Problem, and Selection of Optimal Portfolio.

Unit 13 discusses everything about Portfolio Selection and Finding The Efficient Set, Constrained Minimization, Problem Lag, Range Multipliers Technique, Tracing The Efficient Frontier, Limitations Of Markowitz Approach, Single Index Model, The Assumptions And The Model Systematic Risk Diversifiable (Or Residual) Risk And Covariance Of Returns Variance Of Portfolio Returns Estimating Beta And The Diversifiable Risk Component Other Portfolio Selection Models are the related topics that are studied in this unit.

Unit 14 deals with Capital Market Theory- Concepts Of Risk Free Asset, Risk Free Lending And Risk Free Borrowing, Leveraged Portfolio, Market Portfolio, Capital Market Line, The CAPM Assumptions, Security Market Line, Limitations, Arbitrage Pricing Theory (APT).

Unit 15 gives an insight into Portfolio Revision- Meeting Of Portfolio Revision, Need For Portfolio Revision, Portfolio Revision Strategies, Portfolio Revision Practices and Constraints In Portfolio Revision, Formula, Plans, Basic Assumptions And Ground Rules, Constant Dollar-Value Plan, and Constant Ratio Plan.

UNIT-12 CONCEPTUAL FRAMEWORK

UNIT STRUCTURE

- 12.0 Objectives
- 12.1 Introduction
- 12.2 Portfolio Analysis
- 12.3 Inputs to Portfolio Analysis
- 12.4 Return and Risk Characteristics of Individual Assets
- 12.5 Expected Return
- 12.6 Risk of a Portfolio Diversification
- 12.7 Selection Portfolio
- 12.8 Selection Problem
- 12.9 Selection of Optimal Portfolio.
- 12.10 Summary
- 12.11 Self Assessment Questions
- 12.12 Suggested Readings

12.1 OBJECTIVES

After completing this unit you will be able:

- To analyze a portfolio.
- To know about various inputs involved in portfolio analysis.
- To measure the return and risk characteristics of Individual Assets.
- To calculate the expected return for a single investment as well as portfolio.
- To study about the Role of Risk Tolerance and other Factors
- To know about Selection of a Portfolio
- To make a Selection of Optimum Portfolio
- To know about Selection Problem

12.2 INTRODUCTION

Portfolio Analysis

Portfolio Analysis is the process of reviewing or assessing the elements of the entire portfolio of securities or products in a business. The review is done for careful analysis of risk and return. Portfolio Analysis conducted at regular intervals helps the investor to make changes in the portfolio allocation and change them according to the changing market and different circumstances. The analysis also helps in proper resource/asset allocation to different elements in the portfolio.

A portfolio is a combination of a number of securities. Portfolio analysis is a quantitative method for selecting an optimal portfolio that can strike a balance between maximizing the return and minimizing the risk in various uncertain environments. To select the optimal portfolio, we must first answer the questions “what is return of a portfolio” and “what is risk of the portfolio”. If we could only use the natural language like “the likely gain of the portfolio” to describe return and “the likely loss of the portfolio” to describe risk, we would not be able to quantify return and risk of the portfolio. Then it would be impossible to compare the return level and risk level of portfolios, let alone find the maximum return and minimum risk. To use measurable terms to define return and risk, we should start with input data, i.e., the individual security returns.

The advantages of portfolio analysis for any company are:

- Evaluation of the firm’s business by the top management
- It helps to assess the company’s attractiveness
- Raises issues related to cash flow availability
- It helps to assess the competitive strength of the company with respect to market share, contribution margin, product fit etc.
- Communication is facilitated

Test your progress-

Q.1. What is Portfolio analysis and what are the benefits of the same for any company?

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12.3 INPUTS TO PORTFOLIO ANALYSIS

There are few things more important and more daunting than creating a long-term investment strategy that can enable an individual to invest with confidence and with clarity about his or her future. Constructing an investment portfolio requires a deliberate and precise portfolio-planning process that follows five essential steps.

Step 1: Assess the Current Situation- Planning for the future requires having a clear understanding of an investor’s current situation in relation to where they want to be. That requires a thorough assessment of current assets, liabilities, cash flow and investments in light of the investor's most important goals. Goals need to be clearly defined and quantified so that the assessment can identify any gaps between the current investment strategy and the stated goals. This step needs to include a frank discussion about the investor’s values, beliefs, and priorities, all of which set the course for developing an investment strategy.

Step 2: Establish Investment Objectives- Establishing investment objectives centers on identifying the investor’s risk-return profile. Determining how much risk an investor is willing and able to assume, and how much volatility the investor can withstand, is key to formulating a portfolio strategy that can deliver the required returns with an acceptable level of risk. Once an acceptable risk-return profile is developed, benchmarks can be established for tracking the portfolio’s performance. Tracking the portfolio’s performance against benchmarks allows smaller adjustments to be made along the way.

Step 3: Determine Asset Allocation- Using the risk-return profile, an investor can develop an asset allocation strategy. Selecting from various asset classes and investment options, the investor can allocate assets in a way that achieves optimum diversification while targeting the expected returns. The investor can also assign percentages to various asset classes, including stocks, bonds, cash and alternative investments, based on an acceptable range of volatility for the portfolio. The asset allocation strategy is based on a snapshot of the investor’s current situation and goals and is usually adjusted as life changes occur. For example, the closer an investor gets to his or her retirement target date, the more the allocation may change to reflect less tolerance for volatility and risk.

Step 4: Select Investment Options- Individual investments are selected based on the parameters of the asset allocation strategy. The specific investment type selected depends in large part on the investor’s preference for active or passive management. An actively managed portfolio might include individual stocks and

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bonds if there are sufficient assets to achieve optimum diversification, which is typically over \$1 million in assets. Smaller portfolios can achieve the proper diversification through professionally managed funds, such as mutual funds or with exchange-traded funds. An investor might construct a passively managed portfolio with index funds selected from the various asset classes and economic sectors.

Step 5: Monitor, Measure and Rebalance- After implementing a portfolio plan, the management process begins. This includes monitoring the investments and measuring the portfolio's performance relative to the benchmarks. It is necessary to report investment performance at regular intervals, typically quarterly, and to review the portfolio plan annually. Once a year, the investor's situation and goals get a review to determine if there have been any significant changes. The portfolio review then determines if the allocation is still on target to track the investor's risk-reward profile. If it is not, then the portfolio can be rebalanced, selling investments that have reached their targets, and buying investments that offer greater upside potential.

When investing for lifelong goals, the portfolio planning process never stops. As investors move through their life stages, changes may occur, such as job changes, births, divorce, deaths or shrinking time horizons, which may require adjustments to their goals, risk-reward profiles or asset allocations. As changes occur, or as market or economic conditions dictate, the portfolio planning process begins anew, following each of the five steps to ensure that the right investment strategy is in place.

Test Your Progress-

Q.2. State the inputs to Portfolio Analysis.

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12.4 RETURN AND RISK CHARACTERISTICS OF INDIVIDUAL ASSETS

When it comes to analyzing the returns and risks involved in assessing the characteristics of individual assets there are certain things that are needed to be studied.

Following are the components involved in Individual assets.

12.4.1 RETURN

An individual or business enterprise invests money to make earnings there from over a period of time-say a year. If an investment of Rs. 100 is made in a security promising income Rs. 10 a year, the return would be Rs. 10.

Return is always expressed in terms of percentage of earnings on investment. There is another source of return i.e., price appreciation of Rs. 100. Suppose, the security held does not pay any dividends, but at the end of one year, it is sold in the market, it fetches Rs. 110.

The increase of Rs. 10 in value of security during a year constitutes return on investment. Thus, return equals the amount of dividend plus value of security sold. Algebraically, return on an investment can be expressed as below.

$$R = \frac{D_t + (P_t - P_{t-1})}{P_{t-1}} \quad \dots (5.1)$$

where,

R = rate of return;

D_t = cash dividend at the end of time period t,

P_t = the price of security at the time period t;

P_{t-1} = the price of security at time period t-1

It may be noted that the term in parentheses in the numerator of the above equation represents capital gain or loss. If the price of the security at the end of the period is higher than at the beginning, capital gain is said to have occurred.

On the contrary, capital loss would take place if the ending price were less than the beginning price. Even if capital gain is not realized because the security is not sold, the same should also be taken into consideration while determining return on investments.

12.4.2 RISK

Risk may be defined as variability of returns that are expected from a given investment. The greater the variability, the riskier the security is said to be and the vice-versa. Investment in Treasury bill carrying 8 percent interest is risk free because of the government guarantee. In contrast, investment in equity

shares, which do not assure certainty of return, is risky investment because the cash dividend that is anticipated may or may not materialize.

Some shares are riskier than others and even in years when overall stock market buoys up, many individual shares register decline in price. Therefore, putting all your money in one share is extremely risky. Risky assets rarely fetch the expected rate of returns. They earn either more or less than was originally expected. Investment risk, then, is related to the probability of actually earning a low or negative return. The higher the probability of earning low or negative return, the riskier the investment.

No investment should be undertaken unless the expected rate of return is high enough to compensate the investor for the perceived risk of the investment. It is, therefore, necessary to measure degree of risk associated with the investment.

Riskiness of an investment can be assessed with the help of probability distribution. Probability of an event is the likelihood of occurrence of an event. If an investor invests in a stock, there is 60 percent possibility that it will fetch dividend @ 15 percent at the year-end, 20 percent possibility to get dividend @ 10 percent.

If these possible outcomes are listed, the listing is called probability distribution. This probability distribution can be summarized with reference to the expected return and the standard deviation, as shows in Table 12.1 Expected.

Table 5.1 : Probability distribution of the Rate of return on stock

Probability of Occurrence (Pi)	Possible Return Ri (Percent)	Expected Rate of Return (R)	Variance (0.2)	
			(Ri-R) ²	(Pi)
.60	20	12.00	(.60-.17) ²	(0.12)
.20	15	3.00	(.20-.17) ²	(0.12)
.20	10	2.00	(.20-.17) ²	(0.12)
= 1.00		17.00	= .0296	= 0.2

Return is simply a weighted average of the possible returns, with the weights being probabilities of occurrence, thus, the expected return R is:

$$\bar{R} = \sum_{i=1}^n (R_i)(P_i) \quad \dots (5.2)$$

where,

R_i is the return for ith possibility,

P_i is the probability of that return occurring and

n is the total number of possibilities.

The expected return in the above case is 17 percent.

To be more precise and clear, we need a definite value a measure of the dispersion or variability around our expected return. One such measure is the Standard

deviation (0). The higher the standard deviation of returns, the greater is the riskiness of an investment.

The standard deviation can be algebraically expressed as:

$$\sigma = \sqrt{\sum_{i=1}^n (R_i - R)^2 (P_i)} \quad \dots (3)$$

Where, $\sqrt{\quad}$ represents the square root.

The square of the standard deviation, σ^2 , is termed as the variance of the distribution. Operationally, variance of probability of distribution is first computed and then the square root of this figure provides us with the standard deviation.

Table 12.1. shows our example distribution’s variance to be **.0297**. Taking the square root of this value, we find that the distribution’s standard deviation is **.172**. Thus, the standard deviation is basically a weighted average of the deviations from the expected value, and it provides insight into how far above or below the expected value the actual value is likely to be.

Where a probability distribution is normal, the actual return will be ± 1 standard deviation of the expected return as 68.26 percent of the time. Fig. 5.1. explains this point and also shows the situation for ± 2.0 and ± 3.0 .

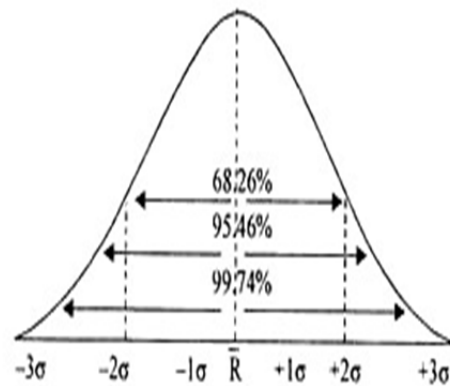


Fig. 5.1. Probability Ranges For a Normal Distribution

12.4.3 COEFFICIENT OF VARIATION

Standard deviation measuring dispersion of expected return can help an investor to make a choice between two or more investment alternatives. For instance, an investor would go for an investment having lower standard deviation over the one with higher standard deviation but the return remaining the same.

Investors invariably want as much return and as little risk as possible. But the pertinent issue plaguing an investor is which one of the two investments he should choose if one has the higher expected return while the other lower standard deviation. Likewise, problem arises where alternatives differ in size.

For instance, there are two projects, X and Y, having normal probability distributions of one-year returns, with the following characteristics:

Table 5.2. Expected Return and Standard Deviation of two Projects.

	Project X	Project Y
Expected Return (R)	0.06	.18
Standard Deviation (σ)	0.04	0.06
coefficient of variation (CV)	0.66	0.33

On the basis of standard deviation, we can erroneously conclude that project Y is more risky than project X. However, in relation to the size of the expected return, project A has a greater variation. Thus, to assess the magnitude of risk of projects, the size of the project needs to be adjusted. For this purpose, another statistical technique will have to be used.

This technique is ‘Coefficient of Variation’ (CV) which is computed by dividing standard deviation by the expected return:

$$CV = \frac{\sigma}{R} \quad \dots (5.4)$$

With the help of CV, an investor can precisely surmise the risk per unit of return and can thereby compare the expected returns on the two alternate projects to reach more logical decision. The higher the CV, the larger the relative risk of the investment. Using the CV as the risk measure, project A with a return distribution CV of .66 is considered as being more risky than project B, with CV of 0.33.

12.4.4 RISK AVERSE AND REQUIRED RETURNS

Most of the investors are risk averse and certainly the average investor is risk averse with respect to his/her money. An investor is risk averse if he chooses less risky investment. Risk aversion has implications for security prices and rates of return. Other things being the same, the higher security’s risk accompanies lower price and higher required return.

To explain the effect of risk aversion on security prices, let us assume company X and Y’s stock sold for Rs. 100 per share and each had an expected rate of return of 20 percent. Investors are risk averse. They would go for X’s stock because of its less risk and start selling Y’s stock to buy X’s stock. This will result in risk in price of X’s stock and decline in price of Y’s stock.

Price changes in stocks of the two companies would lead to change in the expected rates of return on these securities. For example, X’s stock was bid up from Rs. 100 to Rs. 110, while Y’s stock price declined from Rs. 100 to Rs. 75. As a result, the X’s expected return would decrease to 10 percent, while Y’s expected return would rise to 20 percent. The difference in returns, 20%—10% = 10%, is a risk premium (RP). RP represents the additional compensation investors require for assuming the additional risk of Y’s stock.

Thus, risky investments in a market dominated by risk-averse investors, must offer higher expected returns than less risky investments so as to entice people to buy and hold them. Investors seeking low risk must be willing to accept

lower return. Thus, there is no free lunch when it comes to investments. If this situation does not occur, buying and selling in the market will force it to occur.

Since the utility score for B is higher than A, the investor would go for it.

Example 1. Renault Manufacturing Ltd. forecast returns on its share with the following probability distribution:

Return (%)	Probability
-10	0.05
-8	0.05
-5	0.10
5	0.10
8	0.15
16	0.25
20	0.25
25	0.05

Calculate the expected return for Renault.

Solution:

Expected Return

$$E(R) = R_1 \times P_1 + R_2 \times P_2 + \dots + R_n \times P_n = \sum_{i=1}^n R_i P_i$$

$$= (-10 \times 0.05) + (-8 \times 0.05) + (-5 \times 0.10) + (8 \times 0.10) + (8 \times 0.15) + (16 \times 0.25) + (20 \times 0.25) + (25 \times 0.05)$$

$$= 10.81$$

Example 2. The following information are available for two companies:

	X	Y
Expected return (%)	20	25
Standard deviation (%)	10	15
Covariance	120	

- Compute the correlation between the two shares
- What is the expected return and risk of a portfolio in which X and Y have been combined in equal proportions?

Solution:

(a) Correlation (r) = Covariance of x and y / $\sigma_x \sigma_y$

$$= 120 / (10 \times 10) = 1.20$$

(b) Expected return = $W \times X \text{ return } x + W_y \times Y \text{ return } y$

$$= 0.5 \times 20\% + 0.5 \times 25\% = 22.5\%$$

(c) Risk (σ) = $(W^2 X^2 \sigma_x^2 + W_y^2 Y^2 \sigma_y^2 + 2W X W_y Y \text{Cov}(X, Y))^{1/2}$

$$= [(0.5 \times 20\%)^2 + (0.5 \times 25\%)^2 + 2 \times 0.5 \times 20\% \times 0.5 \times 25\% \times 120\%]^{1/2}$$

$$= (100 + 193.75 + 240)^{1/2}$$

$$= 23\%$$

12.5 EXPECTED RETURN AND RISK OF A PORTFOLIO DIVERSIFICATION

The expected return on an investment is the expected value of the probability distribution of possible returns it can provide to investors. The return on the investment is an unknown variable that has different values associated with different probabilities.

The purpose of calculating the expected return on an investment is to provide an investor with an idea of probable profit vs risk. This gives the investor a basis for comparison with the risk-free rate of return. The interest rate on 3-month U.S. Treasury bills is often used to represent the risk-free rate of return.

Expected return is calculated by multiplying potential outcomes (returns) by the chances of each outcome occurring, and then calculating the sum of those results (as shown below):

Expected Return



$$= R_1P_1 + R_2P_2 + \dots + R_nP_n$$

Where;
R = Return expectation in a given scenario
P = Probability of the return being achieved in the scenario
n = Scenario number

In the short term, the return on an investment can be considered a random variable that can take any values within a given range. The expected return is based on historical data, which may or may not provide reliable forecasting of future returns. Hence, the outcome is not guaranteed. Expected return is simply a measure of probabilities intended to show the likelihood that a given investment will generate a positive return, and what the likely return will be.

12.5.1 BASICS OF PROBABILITY DISTRIBUTION

For a given random variable, its probability distribution is a function that shows all the possible values it can take. It is confined to a certain range derived from the statistically possible maximum and minimum values. Distributions can be of two types: discrete and continuous. Discrete distributions show only specific values within a given range. A random variable following a continuous distribution can take any value within the given range. Tossing a coin has two possible outcomes and is thus an example of a discrete distribution. A distribution of the height of adult males, which can take any possible value within a stated range, is a continuous probability distribution.

12.5.2 CALCULATING EXPECTED RETURN FOR A SINGLE INVESTMENT

Let us take an investment A, which has a 20% probability of giving a 15% return on investment, a 50% probability of generating a 10% return, and a 30% probability of resulting in a 5% loss. This is an example of calculating a discrete probability distribution for potential returns.

The probabilities of each potential return outcome are derived from studying historical data on previous returns of the investment asset being evaluated. The probabilities stated, in this case, might be derived from studying the performance of the asset over the previous 10 years. Assume that it generated a 15% return on investment during two of those 10 years, a 10% return for five of the 10 years, and suffered a 5% loss for three of the 10 years.

The expected return on investment A would then be calculated as follows:

$$\text{Expected Return of A} = 0.2(15\%) + 0.5(10\%) + 0.3(-5\%)$$

(That is, a 20%, or .2, probability times a 15%, or .15, return; plus a 50%, or .5, probability times a 10%, or .1, return; plus a 30%, or .3, probability of a return of negative 5%, or -.5)

$$= 3\% + 5\% - 1.5\%$$

$$= 6.5\%$$

Therefore, the probable long-term average return for Investment A is 6.5%.

12.5.3 CALCULATING EXPECTED RETURN OF A PORTFOLIO

Calculating expected return is not limited to calculations for a single investment. It can also be calculated for a portfolio. The expected return for an investment portfolio is the weighted average of the expected return of each of its components. Components are weighted by the percentage of the portfolio's total value that each accounts for. Examining the weighted average of portfolio assets can also help investors assess the diversification of their investment portfolio.

To illustrate the expected return for an investment portfolio, let's assume the portfolio is comprised of investments in three assets – X, Y, and Z. \$2,000 is invested in X, \$5,000 invested in Y, and \$3,000 is invested in Z. Assume that the expected returns for X, Y, and Z have been calculated and found to be 15%, 10%, and 20%, respectively. Based on the respective investments in each component asset, the portfolio's expected return can be calculated as follows:

$$\text{Expected Return of Portfolio} = 0.2(15\%) + 0.5(10\%) + 0.3(20\%)$$

$$= 3\% + 5\% + 6\%$$

$$= 14\%$$

Thus, the expected return of the portfolio is 14%.

Portfolio Component B: 7%, 6%, 9%, 12%, 6%

Calculating the expected return for both portfolio components yields the same figure: an expected return of 8%. However, when each component is examined for risk, based on year-to-year deviations from the average expected returns, you find that Portfolio Component A carries five times more risk than Portfolio Component B (A has a standard deviation of 12.6%, while B's standard deviation is only 2.6%). Standard deviation represents the level of variance that occurs from the average.

12.6 THE ROLE OF RISK TOLERANCE AND OTHER FACTORS

The concept of expected return is part of the overall process of evaluating a potential investment. Although market analysts have come up with straightforward mathematical formulas for calculating expected return, individual investors may consider additional factors when putting together an investment portfolio that matches up well with their personal investment goals and level of risk tolerance.

For example, an investor might consider the specific existing economic or investment climate conditions that are prevalent. During times of extreme uncertainty, investors are inclined to lean toward generally safer investments and those with lower volatility, even if the investor is ordinarily more risk-tolerant. Thus, an investor might shy away from stocks with high standard deviations from their average return, even if their calculations show the investment to offer an excellent average return.

It's also important to keep in mind that expected return is calculated based on a stock's past performance. However, if an investor has knowledge about a company that leads them to believe that, going forward, it will substantially outperform as compared to its historical norms, they might choose to invest in a stock that doesn't appear all that promising based solely on expected return calculations. A helpful financial metric to consider in addition to expected return is the return on investment ratio (ROI), a profitability ratio that directly compares the value of increased profits a company has generated through capital investment in its business.

Although not a guaranteed predictor of stock performance, the expected return formula has proven to be an excellent analytical tool that helps investors forecast probable investment returns and assess portfolio risk and diversification.

12.7 SELECTION OF PORTFOLIO

The objective of every rational investor is to maximise his returns and minimise the risk. Diversification is the method adopted for reducing risk. It essentially results in the construction of portfolios. The proper goal of portfolio construction would be to generate a portfolio that provides the highest return and

the lowest risk. Such a portfolio would be known as the optimal portfolio. The process of finding the optimal portfolio is described as portfolio selection.

The conceptual framework and analytical tools for determining the optimal portfolio in disciplined and objective manner have been provided by Harry Markowitz in his pioneering work on portfolio analysis described in 1952 Journal of Finance article and subsequent book in 1959. His method of portfolio selection has come to be known as the Markowitz model. In fact, Markowitz’s work marks the beginning of what is known today as modern portfolio theory. Feasible set of portfolios: With a limited number of securities an investor can create a very large number of portfolios by combining these securities in different proportions. These constitute the feasible set of portfolios in which the investor can possibly invest. This is also known as the portfolio opportunity set.

Each portfolio in the opportunity set is characterised by an expected return and a measure of risk, viz., variance or standard deviation of returns. Not every portfolio in the portfolio opportunity set is of interest to an investor. In the opportunity set some portfolios will obviously be dominated by others. A portfolio will dominate another if it has either a lower standard deviation and the same expected return as the other, or a higher expected return and the same standard deviation as the other.

Portfolios that are dominated by other portfolios are known as inefficient portfolios. An investor would not be interested in all the portfolios in the opportunity set. He would be interested only in the efficient portfolios. Efficient set of portfolios: Let us consider various combinations of securities and designate them as portfolios 1 to n. The expected returns of these portfolios may be worked out. The risk of these portfolios may be estimated by measuring the standard deviation of portfolio returns. The table below shows illustrative figures for the expected returns and standard deviations of some portfolios:

Portfolio no.	Expected Return (per cent)	Standard deviation (risk)
1	5.6	4.5
2	7.8	5.8
3	9.2	7.6
4	10.5	8.1
5	11.7	8.1
6	12.4	9.3
7	13.5	9.5

8	13.5	11.3
9	15.7	12.7
10	16.8	12.9

If we compute portfolio nos. 4 and 5, for the same standard deviation of 8.1 portfolio no. 5 gives a higher expected return of 11.7, making it more efficient than portfolio no. 4. Again, if we compare portfolio nos. 7 and 8, for the same expected return of 13.5 per cent, the standard deviation is lower for portfolio no. 7, making it more efficient than portfolio no. 8.

Thus, the selection of portfolio by the investor will be guided by two criteria:

1. Given two portfolios with the same expected return, the investor would prefer the one with the lower risk.
2. Given two portfolios with the same risk, the investor would prefer the one with the higher expected return.

These criteria are based on the assumption that investors are rational and also risk-averse. As they are rational they would prefer more return to less return. As they are risk-averse, they would prefer less risk to more risk.

As each possible portfolio in the opportunity set or feasible set of portfolios has an expected return and standard deviation associated with it, each portfolio would be represented by a single point in the risk-return space enclosed within the two axes of the graph.

12.8 SELECTION PROBLEM

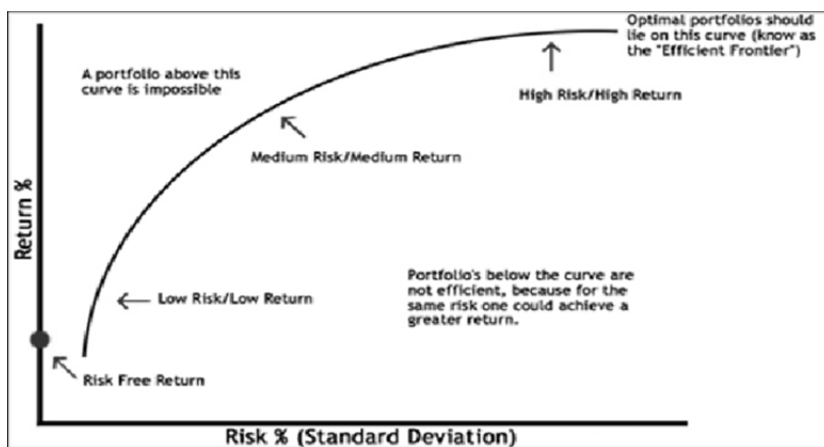
Portfolio selection problems conventionally means 'minimizing the risk, given the certain level of returns' from some financial assets. This problem is frequently solved with quadratic or linear programming methods, depending on the risk measure that used in the objective function.

However, the solutions obtained by these method are in real numbers, which may give some problem in real application because each asset usually has its minimum transaction lots. In the classical approach considering minimum transaction lots were developed based on linear Mean Absolute Deviation (MAD), variance (like Markowitz's model), and semi-variance as risk measure.

In this paper we investigated the portfolio selection methods with minimum transaction lots with conditional value at risk (CVaR) as risk measure. The mean-CVaR methodology only involves the part of the tail of the distribution that contributed to high losses. This approach looks better when we work with non-symmetric return probability distribution. Solution of this method can be found with Genetic Algorithm (GA) methods.

12.9 SELECTION OF OPTIMUM PORTFOLIO

The selection of an optimum portfolio is really the process of delineating the efficient portfolios and then selecting the best portfolio from the set. Rational investors will obviously prefer to invest in the efficient portfolios. The particular portfolio that an individual investor will select from the efficient frontier will depend on that investor's degree of aversion to risk. A highly risk averse investor will hold a portfolio on the lower left hand segment of the efficient frontier, while an investor who is not too risk averse will hold one on the upper portion of the efficient frontier. The selection of the optimal portfolio thus depends on the investor's risk aversion, or conversely on his risk tolerance.



Through this curve the investor can clearly know that any portfolio above the given curve is impossible. And the portfolio below the curve is inefficient as the risk involved in this portfolio cannot fetch a higher return.

But if the investor invests on the given curve line he/she may fetch lower, medium and high return as per the risk involved in it. Higher the risk, higher the return.

Test Your Progress :

Q.5. What do you understand by selection of a portfolio?

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Q.6. What are the problems involved in selection of a portfolio?

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Q.7. How can we select an optimum portfolio?

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12.10 SUMMARY

A portfolio is a combination of a number of securities. Portfolio analysis is a quantitative method for selecting an optimal portfolio that can strike a balance between maximizing the return and minimizing the risk in various uncertain environments.

To select the optimal portfolio, we must first answer the questions “what is return of a portfolio” and “what is risk of the portfolio”. If we could only use the natural language like “the likely gain of the portfolio” to describe return and “the likely loss of the portfolio” to describe risk, we would not be able to quantify return and risk of the portfolio. Then it would be impossible to compare the return level and risk level of portfolios, let alone find the maximum return and minimum risk. To use measurable terms to define return and risk, we should start with input data, i.e., the individual security returns.

There are various components involved in selecting an optimum portfolio. And expected returns are calculated in advance /before investing in any kind of security or a set of securities.

12.11 SELF ASSESSMENT QUESTIONS

1. Define Portfolio Analysis.
2. What are the inputs of portfolio analysis?
3. What are the advantages of portfolio analysis?
4. What is return in reference with individual assets? Explain using an example.
5. Define risk in reference with individual assets.
6. What is coefficient of variation? Describe using the formula and example.
7. Explain the effect of risk aversion on security prices using an example.
8. What is expected return define using its formula.
9. How can we calculate expected return of a single investment? State an example.
10. How can we calculate expected return of a portfolio? State an example.
11. How do we analyze any risk involved with an investment?
12. What is the role of risk tolerance in a portfolio?
13. What is selection of a portfolio?
14. How portfolio selection is done?
15. What are the problems associated in selecting a portfolio?
16. What is an optimum portfolio? How can we select an optimum portfolio?

12.12 SUGGESTED READINGS

Following are the sources for references:-

- Slideshare.net
- iopscience.iop.org/

- Shodhganga
- Corporatefinanceinstitute.com
- yourarticlelibrary.com
- Wikipedia

Answers-

Ans .4. Given, Total portfolio = \$3 million + \$4 million + \$3 million = \$10 million

- $r_A = 8.5\%$
- $r_B = 5.0\%$
- $r_C = 6.5\%$

In below-given table is the data for the calculation of Expected Return.

	A	B	C	D	E
1					
2		Security A	Security B	Security C	
3	Asset Value	\$3	\$4	\$3	
4	Total Portfolio	\$10	\$10	\$10	
5	Rate of Return of each Asset (r)	8.5%	5.0%	6.5%	
6					

For the calculation of the portfolio's expected return first, we will need to calculate the weight of each asset.

So, the Weight of each investment will be calculated as-

$$w_A = \$3 \text{ million} / \$10 \text{ million} = 0.3$$

$$w_B = \$4 \text{ million} / \$10 \text{ million} = 0.4$$

$$w_C = \$3 \text{ million} / \$10 \text{ million} = 0.3$$

$$\text{Expected return} = 0.3 * 8.5\% + 0.4 * 5.0\% + 0.3 * 6.5\%$$

So, Expected Return of the Portfolio= 6.5%.

UNIT-13 PORTFOLIO SELECTION

UNIT STRUCTURE

- 13.0 Objectives
- 13.1 Introduction
- 13.2 Finding the Efficient Set
- 13.3 Constrained Minimisation Problem
- 13.4 Lagrange Multipliers Technique
- 13.5 Tracing the Efficient Frontier
- 13.6 Limitation of Markowitz Approach
- 13.7 Single-Index Model
- 13.8 The Assumptions and the Model
- 13.9 Systematic Risk and Diversifiable (or Residual) Risk and Covariance of Returns
- 13.10 Variance of Portfolio Returns
- 13.11 Estimating Beta and the Diversifiable Risk Component
- 13.12 Other Portfolio Selection Models
- 13.13 Summary
- 13.14 Key Words
- 13.15 Self-Assessment Questions/Exercises
- 13.16 Further Readings

13.0 OBJECTIVES

The objectives of this unit are to:

- find the efficient set
- explain and illustrate the Markowitz's approach to delineating efficient set
- discuss the basic tenets of Sharpe's single-index model and how the model simplifies selection process
- describe other portfolio selection models.
- understand Systematic Risk and Diversifiable (or Residual) Risk and Covariance of Returns.

13.1 INTRODUCTION

Portfolio Selection- In the previous unit, we noted that an investor's opportunity set of investments or portfolios will be defined by the 'efficient set'. But we left the question of actually finding the efficient set unanswered. This unit will first provide a logical approach to delineating efficient set. We will then discuss some of the practical problems of implementing this approach, and present another model, known as 'single-index model', that simplifies the portfolio selection process to a great extent. Finally, we will indicate some other portfolio selection techniques.

13.2 FINDING THE EFFICIENT SET

We may recall that an efficient set is a continuous curve which, in turn, means that there are infinite number of efficient portfolios. This poses a typical problem to the investors. How can one determine the composition (i.e., combination of assets and portfolio weights) of each of an infinite number of efficient portfolios? Markowitz did contemplate this problem and, in a major breakthrough, presented a solution algorithm based on 'quadratic programming' technique. While a complete description of the algorithm, which is referred to as Markowitz's 'critical line method', is beyond the scope of this unit, we may give you a rough idea of what is being accomplished by it.

13.3 CONSTRAINED MINIMISATION PROBLEM

As we know, an efficient set can be determined by minimising portfolio risk (i.e., return variance) for any level of expected return. If we specify the return at some level and minimize risk, we have one point (i.e., a portfolio) on the efficient frontier. Thus, we need to solve the following constrained minimisation problem:

Minimise variance $(\sigma_p^2) = \sum_{i=1}^n \sum_{j=1}^n x_i x_j \sigma_{ij}$

Subject to the constraints:

1. Expected return (R_p) is equal to some predetermined level R_p
2. The sum of the portfolio weights for all assets in the portfolio must be equal to 1 ($\sum x_i = 1$)
3. The portfolio weight assigned to any asset should be positive ($x_i \geq 0$, $i = 1, \dots, n$). In other words, short sales are not allowed.

This is a quadratic programming problem because of the presence of terms like x^2 and x_i, x_j in the objective function.

13.4 LAGRANGE MULTIPLIERS TECHNIQUE

If the constrained problem has only equality constraints, the method of Lagrange multipliers can be used to convert it into an unconstrained problem

whose number of variables is the original number of variables plus the original number of equality constraints.

Alternatively, if the constraints are all equality constraints and are all linear, they can be solved for some of the variables in terms of the others, and the former can be substituted out of the objective function, leaving an unconstrained problem in a smaller number of variables.

The above kind of non-linear minimization problem can be solved by applying Lagrange Multipliers Technique. We will explain the procedure with a three-assets case and using the following example data:

Equity Shares	Monthly Expected Return (%)	Standard Deviation (%)
Ashok Leyland	3.5	11
ACC	9.0	20
Grasim	4.5	12

Variance-Covariance Matrix

	Ashok Leyland	ACC	Grasim
Ashok Leyland	.012	.009	.007
ACC	.009	.040	.014
Grasim	.007	.014	.014

Let us suppose that x_1 , x_2 and x_3 are the portfolio weights corresponding to the equity shares of Ashok Leyland, ACC and Grasim respectively. The portfolio weights must add up to 1, i.e.,

$$x_1 + x_2 + x_3 = 1$$

a. expected rate of return equation (i.e., the return constraint):

$$0.05 = .035 x_1 + .09x_2 + .045 (1-x_1 - x_2)$$

which on simplification yields : $0.1 x_1 - .045x_2 + .005 = 0$

b. returns-variance of the portfolio:

$$\sigma_p^2 = [x_1^2 * 0.012] + [x_2^2 * 0.04] + [(1-x_1-x_2)^2 * 0.014] + [2 * .009 x_1 x_2] + [2 * 0.007 x_1 (1-x_1-x_2)] + [2 * 0.014 x_2 (1-x_1-x_2)]$$

which on simplification can be written as:

$$\sigma_p^2 = [0.012 x_1^2] + [0.04 x_2^2] + [0.014 x_2] + [.004 x_1 x_2] + 0.014$$

Following the Lagrange Multipliers method, we now write the objective function as

$$\text{Minimise } Z = \sigma_p^2 + \lambda[R_p^* - R_p]$$

Or,

$$\text{Minimise } Z = [0.012 x_1^2] + [0.04 x_2^2] + [0.014 x_2] + [.004 x_1 x_2] + 0.014 + \lambda [0.01 x_1 - 0.45 x_2 + 0.005]$$

where λ is known as the 'Lagrange multiplier'. The expression within the bracket ensures that the return constraint will be always satisfied while minimizing the variance.

Thus values of x_1 , x_2 and λ for which Z will be minimum, can be obtained by setting the partial derivatives equal to zero, and then solving the equations simultaneously. This is shown below:

$$\delta Z / \delta x_1 = .024x_1 + .004x_2 + .01 \lambda - .014 = 0$$

$$\delta Z / \delta x_2 = .004x_1 + .08x_2 - .045 = 0$$

$$\delta Z / \delta \lambda = .01 x_1 - .045 x_2 - .005 = 0$$

Solving the above set of equations, we get

$$X_1 = .445$$

$$X_2 = .210 \quad X_3 = .345$$

$$\lambda = .248$$

Thus, for a target expected rate of return of 5 per cent, the 'minimum variance' set or 'efficient portfolio' will correspond to an allocation by 44.5 per cent of the fund to Ashok Leyland, 21 per cent to ACC, and the remaining to Grasim. If we plug the portfolio weights into the objective function, we find

$$\sigma_p^2 = 0.0117$$

Or,

$$\sigma_p = 0.1089$$

So, our minimum-risk portfolio will have a standard deviation of returns of 10.8 per cent.

The value of λ in our solution indicates the incremental change in the value of objective function (i.e., the variance) that one might expect as a result of an infinitesimally small change in the constraint (in this instance, the target expected return). Since the objective function is nonlinear, its slope changes continuously and so should λ .

13.5 TRACING THE EFFICIENT FRONTIER:

The process discussed above can be repeated to find as many points as desired on the efficient frontier, each time starting with a specified target expected rate-of-return. In actual practice, standard computer packages are available which can find solutions quickly and accurately. For our example case of three equity shares.

Table 13.1 shows ten efficient portfolios identified by the application of such a package.

Table 13.1 Ten Efficient Portfolios

Portfolio	1*	2	3* *	4	5
Expected Return (%)	3.9	4.5	5.0	5.6	6.2
Standard Deviation (%)	9.9	10.2	10.8	11.7	12.8
Composition (%):					
Ashok Leyland	58.6	50.4	44.5	37.7	31.3
ACC	0.0	10.7	21.0	33.0	44.2
Grasim	41.4	38.9	34.5	29.3	24.5

Portfolio No.	6	7	8	9	10
Expected Return (%)	6.7	7.3	7.9	8.4	9.0
Standard Deviation (%)	14.1	15.4	16.9	18.4	20.0
Composition (%): Ashok Leyland	24.9	18.5	12.2	5.8	0.0
ACC	55.3	66.4	77.6	88.7	100.0
Grasim	19.8	15.1	10.2	5.5	0.0

This is the 'global minimum variance' efficient portfolio. No other portfolio offers lower level of risk than this.

We have already illustrated the determination of this portfolio through the application of Lagrange Multipliers Technique.

Once sufficient number of efficient portfolios are determined, it is a simple matter for the computer, using its capability for graphics, to draw the

graph of the efficient set. Figure 11.1 shows the graph drawn by the computer package.

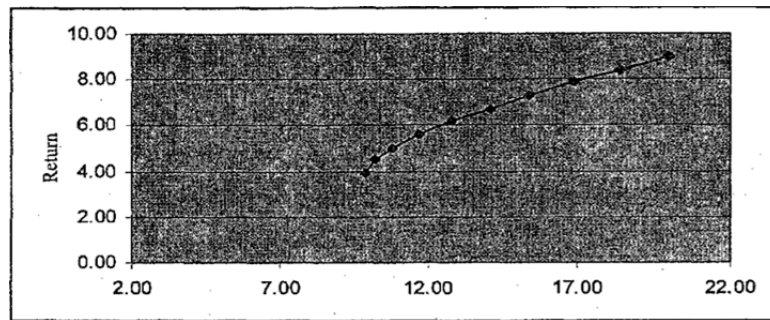


Fig 13.1 Efficient Frontier

In this context, it would be interesting to know the concepts of 'corner portfolios' as introduced by Markowitz. Any set of efficient portfolios can be described in terms of still a smaller sub-set of efficient portfolios, which Markowitz termed as 'corner portfolios'.

The distinguishing feature of two adjacent corner portfolios is that:

- (a) one portfolio will contain either all the assets which appear in the other, plus one additional asset, or,
- (b) all but one of the assets which appear in the other. Thus, while moving along the efficient frontier curve from one corner portfolio to the next, portfolio weights will vary until either one asset drops out of the portfolio or another enters. The point (or the portfolio) at which a change in the composition of assets takes place marks a new corner portfolio. For instance, portfolios numbered 1 and 4 in Table 13.1, may be considered as corner portfolios.

An important property of corner portfolios is that any combination of two adjacent corner portfolios will result in a portfolio that lies on the efficient set between the two corner portfolios. For example, if an investor puts 30 per cent of his or her available funds in the portfolio numbered 1 and 70 per cent in the portfolio numbered 4 (see Table 13.1), then the resulting portfolio of the following composition (or portfolio weights) will be another efficient portfolio lying between the corner portfolios 1 and 4.

$$\text{Ashok Leyland} \quad : .30 \times 58.6 + .70 \times 37.7 = 44.0\%$$

$$\text{ACC} \quad : .30 \times 0.0 + .70 \times 33.0 = 23.1\%$$

$$\text{Grasim: } .30 \times 41.4 + .70 \times 29.3 = 32.9$$

Thus, a computer algorithm may be developed which first determines some successive corner portfolios, and proceeds next to delineate a set of efficient portfolios lying between every two adjacent corner portfolios. Each of these portfolios will correspond to a dot in the return-risk space, which can be finally connected to draw the graph of the efficient set.

13.6 LIMITATION OF MARKOWITZ APPROACH

It is easy to see that the Markowitz's approach to trace efficient set is extremely demanding in its input data needs and computation requirements. This has been probably best expressed by Markowitz himself : "...it is reasonable to ask security analysts to summarize their researches in 100 carefully considered variances of returns. It is not reasonable, however, to ask for almost 5000 carefully and individually considered covariances". Indeed, while analysts and portfolio managers are accustomed to thinking about expected rates of return, they are much less comfortable in assessing the possible ranges of variation in their expectations, and are usually, not at all accustomed to estimating covariance of returns among assets.

The problem is made more complex by the number of estimates of covariance (or correlation) required. For a set of 200 shares, for example, we need to compute $[200(200-1)/2] = 19,900$ covariance. It is unlikely that the analysts will be able to directly estimate such a staggering number of inputs. Obviously, what we need is an alternate formula for portfolio variance, that lends itself to easy computation even when we are dealing with a large set of assets. However, an understanding of Markowitz process would sharpen your understanding on the portfolio theory and management though you may not use in your day to day life Markowitz method of portfolio construction for stocks.

Test Your Progress-

1. Define the following :

a. Efficient set:

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b. Lagrange Multipliers Technique :

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c. Diversifiable Risk :

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2. What do you understand by Constrained Minimisation Problem?

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3. What are the limitations to Markowitz Approach?

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13.7 SINGLE-INDEX MODEL

In 1952, Harry Markowitz published a portfolio selection model that maximized a portfolio's return for a given level of risk. A graph of these portfolios constitutes the efficient frontier of risky assets. This model required the estimation of expected returns and variances for each security and a covariance matrix that

calculated the covariance between each possible pair of securities within the portfolio based on historical data or through scenario analysis. For n securities, that would require n estimates of expected returns, n estimates of their variances, and a covariance matrix that consisted of $(n^2 - n) / 2$ estimates of covariances. The calculations increase rapidly as n increases.

We get such a capability with the 'single-index model' developed by a student of Markowitz named William Sharpe (1963). In the 1950s, after techniques for estimating the required inputs to this model were perfected, packaged, and marketed as computer software, modern portfolio really took off in terms of practical applications. Now the single-index model is widely employed to allocate investments in the portfolio between individual equity shares, while the original more general model of Markowitz is widely used to allocate investments between types of assets, such as bonds, shares, and real estate.

To minimize firm-specific risk, a portfolio should consist of securities with no, or preferably, negative covariances. But to calculate covariances for large portfolios requires large amounts of computing power. Moreover, since returns and variances have to be estimated, these estimations sometimes lead to nonsensical results when applied to the portfolio as a whole. Index models greatly reduce the computations needed to calculate the optimum portfolio while also eliminating nonsensical results.

To simplify analysis, the single-index model assumes that there is only 1 macroeconomic factor that causes the systematic risk affecting all stock returns and this factor can be represented by the rate of return on a market index, such as the S&P 500. According to this model, the return of any stock can be decomposed into the expected excess return of the individual stock due to firm-specific factors, commonly denoted by its alpha coefficient (α), which is the return that exceeds the risk-free rate, the return due to macroeconomic events that affect the market, and the unexpected microeconomic events that affect only the firm. Specifically, the return of stock i is:

$$r_i = \alpha_i + \beta_i r_m + e_i$$

The term $\beta_i r_m$ represents the stock's return due to the movement of the market modified by the stock's beta (β_i), while e_i represents the unsystematic risk of the security due to firm-specific factors.

In the discussion that follows, we present the basic tenets of the 'single-index model', with reference to investment in equity shares.

13.8 THE ASSUMPTIONS AND THE MODEL

Essentially, the single-index model assumes that the returns of various securities are related only through common relationships with some basic underlying factor. In the words of Sharpe, this factor "may be the level of the stock market as a whole, the gross national product, some price index, or any other factor thought to be the most important single influence on the returns from securities". A casual observation of share-price movements, at least, tends to support this line of argument. There is considerable evidence that when the stock market goes down,

most shares tend to decrease in price. For instance, on the date of budget, several stocks move in the same direction depending on the assessment of the budget on the economy and industry. It appears, therefore, that one reason share returns might be correlated is because of a common response to market changes as measured by the movements in, say, share price index.

To understand the above assumption of the single-index model more precisely, consider Figure 13.2, where we have related the returns of a hypothetical share to the returns on the market index.

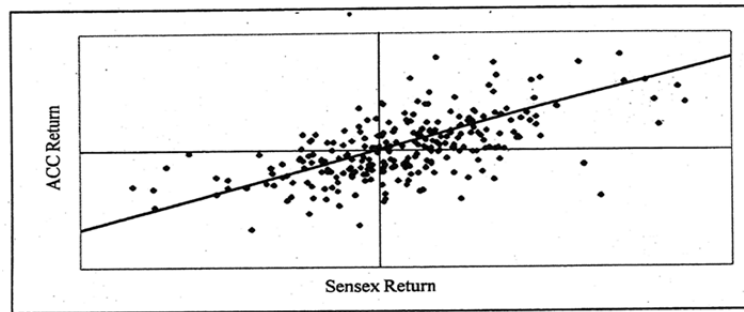


Fig 13.2 ACC Return vs. Sensex Return

The line running through the scatter points is the 'line of best fit', or an estimate of what is known as a share's characteristic line'. Algebraically, the characteristic line can be defined as

$$R_i = a_i + \beta_i R_m$$

Where,

R_i = the return of security i

a_i = the components of share i 's return that is independent of the market's performance—a random variable;

R_m = the rate of return on market index—a random variable; and

β_i (beta) = the slope of the characteristic line that measures the expected change in R_i , given a change in R_m

It is useful to break the term R_i , in two components:

1. α_i (alpha), the expected value of a_i ; and
2. e_i , the random element with a Mean value of zero.

In terms of graphical presentation (see Figure 13.2) e_i (or residuals, as they are frequently referred to) measure vertical deviations from the characteristic line. With this, equation (13.1) can now be written as

$$R_i = \alpha_i + \beta_i R_m + e_i$$

Where, R_m and e_i , (both random variables) are conveniently assumed to be not correlated with each other.

It is further assumed that the residuals are not correlated across shares of different companies; that is, e_i is independent of e_j for all values of i and j . This is an important assumption; it implies that the only reason shares vary together, systematically, is because of a common co-movement with the market. Thus, single-index model assumes away all other possible effects on shares' returns, such as industry effects.

13.9 SYSTEMATIC RISK AND DIVERSIFIABLE (OR RESIDUAL) RISK AND COVARIANCE OF RETURNS

With some manipulations of equation (13.2), we get the following important results:

- (a) the expected return, $R_i = \alpha_j + \beta_i R_m$
- (b) the variance of share's return $\sigma_i^2 = \beta_i^2 \sigma_m^2 + \sigma_{e_i}^2$ where σ_m^2 and $\sigma_{e_i}^2$ are variances of the distribution of R_m and e_i respectively
- (c) covariance of returns between shares i and j , $\sigma_{ij} = \beta_i \beta_j \sigma_m^2$

It is apparent from (a) above that the expected return has two components: a unique or non-market part, α_j , and market related part, $\beta_i R_m$. Even though shares have many common characteristics and, as a result, tend to move together, their numerous individual and distinguishing properties cause shares to co-move with the market at different rates. Accordingly, how sensitive a share's price is to changes in the overall market i.e. the value of its 'beta' is of great significance in determining the expected return.

Like the expected return, we can always split the variance of share's returns into two parts, as shown in (b) above. The first component $\beta_i^2 \sigma_m^2$ is called the 'systematic risk' or market risk' of the investment. Since σ_m^2 is the same for all shares, systematic risks will market risk' of the investment. Since σ_m^2 is the same for all shares, systematic risks will differ among different shares accordingly to the magnitudes of their beta, β_i . Simply stated, beta measures sensitivity of a share's price movements compared with those of the market index. Shares having betas less than 1 can be said to be 'defensive'. One per cent increase (decrease) in the market return is likely to be accompanied by a less than one per cent increase (decrease) in the shares' rate of return. The investors are thus defended to some extent against the occurrence of major down fall in the market return. On the other hand, shares with individual beta values greater than one are considered to be more 'aggressive' or more risky, as one per cent increase (decrease) in the market return is likely to be accompanied by an even greater increase (decrease) in the shares' rates of return. A beta of one implies 'average' riskiness; every one per cent return on the market is associated with one per cent opportunity return on the share. Beta can be negative as well, reflecting that share prices can rise when the market falls and *vice versa*; but this is normally unusual.

The systematic risk is caused by macro events like oil crisis, an unexpected change in rate of inflation, etc. The macro events are broad and affect

nearly all shares to one degree or another, and they may have an impact on the general level of stock market. Thus, one cannot reduce systematic risk by diversifying investment across different shares. That is why the systematic risk is often called 'non-diversifiable' risk.

The second component of variance of share's returns, α_{ei}^2 is known as 'residual variance' or 'unsystematic risk' or 'diversifiable risk'. The source of this kind of risk is 'micro' events, which have impact on individual shares but no sweeping impact on other shares. Examples include the introduction of a new product(s) or the sudden obsolescence of an old one. They might also include labour strike lockout or the resignation or death of a key person in the firm, or splitting up of a business family. Since micro events affect only the individual shares under consideration, their impact can be reduced to a great extent by holding a diversifiable portfolio. We will explain how diversification of risk takes place after a while.

At this point, we may recall that under Markowitz model we are required to compute covariance of returns for every pair of assets comprising the portfolio. We have also observed that without having estimates of covariance, one cannot compute the variance of portfolio returns. However, if the single-index model is a valid description of the process generating shares returns, there is no need for direct estimates of the covariance. All that we need to know are the values of share betas and variance of returns on market index; the covariance between any two shares i and j can next be obtained easily by employing the relationship as noted above. Needless to say that the relationship is much less demanding in terms of estimation procedure and computation time.

What is more amazing to note here is that the single-index model does not require even the indirect estimates of covariance of returns between shares. The model provides a still simpler formula for computing variance of portfolio returns.

13.10 VARIANCE OF PORTFOLIO RETURNS

We begin by restating that the total risk or variance of returns on share 'i' is given by

$$\sigma_i^2 = \beta_i^2 \sigma_m^2 + \alpha_{ei}^2$$

Total variance = Systematic Risk + Residual variance

This equation holds for a portfolio of shares as well. Rewriting the equation for a portfolio, we get,

$$\sigma_p^2 = \beta_p^2 \sigma_m^2 + \sigma_{ep}^2$$

Total Portfolio variance = Portfolio Systematic Risk + Portfolio residual variance

Where the subscript 'p' denotes a portfolio. It can be further shown that

$$\beta_p = \sum_{i=1}^n x_i \beta_i$$

Portfolio Beta = Weighted average of individual share betas and,

$$\sigma_{ep}^2 = \sum_{i=1}^n x_i^2 \sigma_{ei}^2$$

Portfolio residual variance = Weighted average of individual residual variances where weights are squared.

To illustrate the above formula of portfolio variance, let us consider the following two shares:

Share	Beta	Residual Variance
Ashok Leyland	0.54	98.2
Grasim	1.13	62.7

Suppose, an investor is planning to put equal amounts of his investible fund in these two shares. Then we have

$$\beta_p = 0.54 \times .50 + 1.13 \times -.50 = 0.56$$

$$\sigma_{ep}^2 = [98.2 \times (.5)^2] + [62.7 \times (.5)^2] = 40.2$$

If σ_m^2 is equal to 81.0 per cent, the variance of the returns of the portfolio under consideration will be given by

$$\sigma_p^2 = (.56)^2 \times 81.0 + 40.2 = 65.6$$

$$\sigma_p^2 = 8.1 \%$$

Let us now add one more share to the above portfolio, say, the share of ACC with a beta of 1.63 and residual variance of 179.6 per cent. Suppose, the investor decides once again to invest equal amount. This time σ_p^2 will work out to be 11.7 percent, whereas σ_{ep}^2 will be 37.8 per cent.

It is interesting to note that while the portfolio's systematic risk component (β_p) has increased due to the addition of a more risky share, its non-market related risk component has declined. Given the single-index model's assumption that residuals (e_i 's) of different shares are not correlated (we have already explained this assumption), it is not difficult to appreciate how a portfolio's residual variance begins to diminish as the number of shares (n) in the portfolio is increased. Assume for a moment that an investor forms a portfolio by placing equal amounts of his funds into each of n shares. Equation (13.6) then becomes

$$\sigma_{ep}^2 = \left[\frac{1}{n} \right] \sum_{i=1}^n \left[\frac{1}{n} \right] \sigma_{ei}^2$$

where the term within the bracket denotes average residual variance of the shares comprising the portfolio. As the number of shares in the portfolio gets large, portfolio's average residual variance falls so rapidly that most of it is effectively eliminated even for moderately sized portfolios.

At this stage, it would be appropriate to contrast the procedure for computing portfolio variance as outlined above with that of the Markowitz model. We have mentioned earlier that for a portfolio of 200 shares, Markowitz model

requires 19,900 estimates of covariance. Under the single-index model we need, however, only 200 estimates of beta, 200 estimates of residual variance, and one estimate for the variance of returns on market index. Indeed, this is a dramatic reduction in the input data for computing portfolio variance.

But how accurate is the portfolio variance estimate as provided by the single-index model's simplified formula? If it is the Markowitz formula, we know that the variance number of perfectly accurate, given, of course, the accuracy of the covariance estimates. Besides, the formula makes no assumptions regarding the return generating process. On the other hand, the single-index model assumes that the market factor solely determines the shares' returns and residuals' are not correlated across different shares.

Thus, the accuracy of the single-index model's formula for portfolio variance is as good as the accuracy of underlying assumptions. Quite obviously, the assumptions are not strictly accurate. Many researchers have found that there are influences beyond the market that cause shares to move together. In addition, empirical evidence suggests that residuals are correlated to some degree, which is not altogether unexpected. After all, if something (good or bad) happens to a company, some other companies, such as its suppliers and competitors, would be affected simultaneously. The residuals that appear for the shares of these other company would not, therefore, be independent of each other. However, one can always expect that the degree of correlation would not be large enough to impair the relative efficiency with which the single-index model estimate the portfolio variance.

13.11 ESTIMATING BETA AND THE DIVERSIFIABLE RISK COMPONENT

The estimation of beta and the diversifiable risk component of a share involves fitting a 'characteristic line' as shown in Figure 13.2, such that the vertical deviations of the scatter points from the fitted line are minimized. The statistical procedure for obtaining a line of best fit is known as 'simple linear regression' or 'ordinary least squares method (OLS)'. The beta can be computed manually or using computers. Today, analysts generally use computers to get beta value. For instance if you have the monthly returns of a Market Index (like BSE Sensex) and an individual stock's return (say Grasim) in the Microsoft Excel sheet, you can easily compute the beta using a function called =SLOPE(Range of Stock Return, Range of Market Return). At the end of the Unit, the computation of beta is illustrated.

Although the above estimation procedure looks quite straight forward, it is fraught with several practical problems. For instance, what should be the length of beta estimation period—two years, three years or more? Or, should we base our calculation on annual return data? There are many shares which are not regularly traded on the stock exchange; accordingly, their price quotations remain unchanged even the case of ill-traded shares? No doubt, the literature on the subject provides some answers to all such questions, but they need be verified empirically in our context.

Unfortunately, there is dearth of empirical studies with the Indian shares' data. Even if we obtain satisfactory estimates of historical data, we still face the problem of estimating future (or ex ante) beta. What is of concern to us is betas for future holding period, and not the historical betas.

Since large-scale expectational data on returns of individual shares as well as of market index are not available, one cannot directly estimate future betas by fitting regression lines. So, the historical beta must be estimated first and then we can make some adjustments to it for deriving the future beta.

Test Your Progress-

- 1. List out two major points of difference between Markowitz's approach and Sharpe's single-Index Model of selecting optimal portfolio.

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- 2. List out relevant data for computing beta of an equity share.

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- 3. Try, to compute beta of an equity share of your choice.

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13.12 OTHER PORTFOLIO SELECTION MODELS

So far we have considered investment in risky assets like equities. However, an investor can also invest in 'risk-free assets such as 'treasury bills' or 'government securities'. Besides, in our analysis the investor is not allowed to use borrowed money to invest in a portfolio of assets. This means that the investor is not allowed to use financial leverage. If we take into account these new opportunities to the investor, we will notice a major impact on the shape and location of the efficient set. We shall discuss this situation in the next Unit on Capital Market Theory.

We now take a note of some other portfolio selection models that seem to hold great promises to practical applications. One such model is the 'multi-index model'. There are different variants of this model and each of them is developed to capture some of the non-market influences that cause shares to move together (recall that single-index model accounts for only market related influences). The non-market influences, in essence, include a set of economic factors or industry characteristics that account for common movement in share prices. While it is easy to find a set of indices that are associated with non-market effects over any period of time, it is quite another matter to find a set that is successful in predicting covariance that are not market related. There is still a great deal of work to be done before multi-index models consistently outperform the simpler one.

Another model that takes into account a wide spectrum of practical considerations in portfolio selection is the goal-programming model. In real life, an investor's goals and desires transcend the notion of a trade-off between only risk and return. For example, an investor may prefer to invest some minimum amount in several different shares, but at the same time he or she may not like individual investment to exceed a specified limit. Additionally, he or she may prefer dividend income to capital appreciation. There may also be a desire not to allow the portfolio beta to be either above or below a predetermined level. Apart from holding such diverse goals and desires, the investor may even set the order of their priorities. In this kind of investment problem situation, the goal-programming model is ideally suited to provide an optimal solution. Further goal programming solution can be easily obtained by available computer packages.

13.13 SUMMARY

This unit has provided some insights into Markowitz's approach to trace the efficient set. The application of Markowitz's model requires estimation of large number of covariance. And without having estimates of covariance, one cannot compute the variance of portfolio returns. This makes the task of delineating efficient set extremely difficult. However, William Sharpe's 'single-index model' simplifies the task to a great extent. Even with a large population of assets from which to select portfolios, the number of required estimates are amazingly less than what are required in Markowitz's model. But how accurate is the portfolio variance estimate as provided by the single-index model's simplified formula? While the Markowitz's model makes no assumption regarding the source of the covariance, the single-index model does. Obviously, the accuracy of the latter model's formula for portfolio variance is as good as the accuracy of its underlying assumption.

In passing, we have also mentioned in this unit other portfolio selection models, such as 'multi-index model' and 'goal programming model' which have high intuitive appeal but would require much more work before they outperform the simple ones.

13.14 KEY WORDS

Lagrange Multipliers Technique is a technique of solving non-linear optimization problems.

Corner Portfolio is an efficient portfolio with the following property: any combination of two adjacent corner portfolios will result in a portfolio that lies on the efficient set between the two corner portfolios.

Single-Index Model purports to explain the covariance, which exist between the returns on different assets on the basis of the relationship between the returns and a single index, usually the market index.

Market-Index (or Market Portfolio) refers to the ultimate market index, containing a common fraction of the total market value of every capital investment in the economic system.

Characteristic Line shows the linear relationship between the return on any asset and the return on the market index.

Systematic (or Market Portfolio) risk is that part of an asset's total risk which is related to moves in the market index and, hence, cannot be diversified away.

Beta Coefficient refers to relative measure of sensitivity of an asset's return to change in the return on the market index. Mathematically, the beta of an asset is the asset's covariance with the market index divided by the variance of the market index.

Unsystematic (or Diversifiable) Risk is that part of an asset's total risk which arises out of factors unique to the asset. Such risk can be diversified away through portfolio investment.

Simple Linear Regression (or Ordinary Least Squares) refers to a statistical model of the relationship between two random variables in which one variable is hypothesized to be linearly related to the other. This relationship is depicted by a regression line which is a straight line fitted to pairs of values of the two variables, so that the sum of the squared random error terms is minimized.

Multi-Index Model purports to explain the covariance that exist between assets on the basis of changes over time in two or more indices, such as the market, GDP, or the money supply.

Goal Programming is a technique to solve optimization problems with multiple goals. When no feasible solution exists, the goal-programming model permits attaining the goals as closely as possible.

13.15 SELF-ASSESSMENT QUESTIONS/EXERCISES

1. Explain in your own words the following:
 - a. Significance of corner portfolios'
 - b. Major limitations of Markowitz's model
 - c. Key assumptions of the Single-Index model
 - d. How a portfolio's residual variance begins to diminish as the number of assets in the portfolio is increased.

2. Consider the data pertaining to the three-assets case used in this Unit to explain the application of Lagrange Multipliers Technique. Assuming a target expected rate of return (R_p) of 6 percent, determine the minimum-variance portfolio (specify the proportion of funds to be allocated to each share). What is the standard deviation of portfolio return?

Monthly return (excluding dividend) data are presented below for each of the three shares and BSE National Index (1983-84 =100) for an 18-month period (Oct. 1990-March 1992). Compute the return and standard deviation of a portfolio constructed by placing one third of your funds in each share, using:

- a. the single index model
- b. the direct method (as is considered under Markowitz's model) Do the answers in (a) and (b) above differ? why?

Month	ITC	Tata Steel	Britania	B SE National Index
1	9.43	45.57	5.98	7.41
2	0.00	-14.78	-9.68	-5.33

3	-4.31	-5.10	-8.93	-7.35
4	-18.92	-19.35	-13.73	-14.64
5	-6.67	1.67	13.64	1.58
6	28.57	10.66	12.00	15.19
7	20.00	3.11	2.68	5.11
8	2.93	10.92	-0.87	0.76
9	5.25	-6.74	-2.63	-0.97
10	21.45	20.56	17.12	10.44
11	23.13	13.36	15.38	17.47
12	32.83	-3.66	1.33	6.42
13	1.52	-6.33	1.32	-3.13
14	11.99	2.70	16.88	5.42
15	-23.08	7.46	5.56	-2.08
16	6.00	23.27	9.47	10.06
17	44.26	5.63	4.81	17.68
18	56.82	27.74	76.15	29.59

13.16 FURTHER READINGS

Haugen. Robert A. 1990 Modern Investment Theory, 5th Edn., Prentice-Hall International, Inc.

Alexander, Gordon J. and Sharpe, William F., and Jeffery V. Bailay, Fundamentals of Investments, 3rd Edn., Prentice-Hall. Inc.

Appendix

Table 13.1: Monthly Return of Sensex and Select Stocks and Beta Computation

Month End	Sensex	Castro!	Colgate	Infosys
30-Jan-1997	7.65%	-0.12%	6.98%	0.03%
27-Feb-1997	-2.34%	0.18%	11.88%	14.83%
27-Mar-1997	8.98%	5.35%	10.53%	15.27%
5-Apr-1997	2.41%	-4.64%	-1.73%	19.97%
27-May-1997	-3.48%	-2.63%	-7.21%	10.62%
27-Jun-1997	11.93%	18.46%	-1.47%	23.79%
25-Jul-1997	1.37%	31.21%	7.45%	12.42%
27-Aug-1997	-2.20%	5.11%	5.14%	30.34%
26-Sep-1997	-4.21%	-6.44%	-8.84%	21.17%
27-Oct-1997	0.23%	-1.27%	-0.85%	-13.59%
27-Nov-1997	-7.78%	12.78%	-6.78%	3.81%
26-Dec-1997	0.15%	3.35%	-8.47%	-17.87%
27-Jan-1998	-9.83%	-7.55%	-6.04%	-2.68%
27-Feb-1998	10.56%	0.65%	7.79%	22.36%
27-Mar-1998	7.91%	-0.36%	8.46%	20.00%
27-Apr-1998	4.46%	0.40%	1.83%	26.28%
27-May-1998	-7.49%	-7.15%	-11.87%	17.17%
26-Jun-1998	-16.11%	-11.72%	-9.59%	-11.16%
27-Jul-1998	-2.64%	-9.72%	12.78%	12.21%
27-Aug-1998	-3.58%	7.03%	-19.58%	6.69%
25-Sep-1998	8.36%	9.97%	-5.18%	-5.18%
27-Oct-1998	-10.17%	3.87%	-12.86%	-2.76%
27-Nov-1998	-3.89%	-1.15%	0.96%	-3.66%

24-Dec-1998	6.48%	12.36%	13.60%	24.04%
27-Jan-1999	13.18%	19.18%	7.72%	59.68%
27-Feb-1999	1.36%	-1.80%	-14.19%	25.65%
26-Mar-1999	5.82%	0.24%	-2.61%	-7.42%
26-Apr-1999	-9.79%	-5.48%	1.17%	-4.39%
27-May-1999	19.02%	8.25%	18.86%	23.61%
25-Jun-1999	6.45%	-1.19%	-1.02%	14.02%
27-Jul-1999	11.71%	4.82%	27.70%	23.33%
27-Aug-1999	6.04%	2.97%	8.43%	24.44%
27-Sep-1999	-3.18%	-14.02%	-5.01%	25.43%
27-Oct-1999	0.86%	-5.09%	-2.35%	6.92%
26-Nov-1999	-1.08%	-3.83%	-14.41%	28.03%
27-Dec-1999	2.41%	-10.10%	-2.34%	31.66%
27-Jan-2000	11.43%	13.61%	0.00%	15.45%
25-Feb-2000	4.73%	-13.93%	-27.40%	19.54%
27-Mar-2000	-8.48%	1.70%	-5.97%	19.53%
27-Apr-2000	-9.07%	-4.66%	-3.01%	-23.70%
26-May-2000	-12.71%	-3.87%	12.41%	-24.82%
27-Jun-2000	14.74%	5.92%	7.36%	36.20%
27-Jul-2000	-8.66%	-14.00%	10.91%	-16.87%
25-Aug-2000	3.17%	0.57%	-16.67%	19.13%
27-Sep-2000	-5.72%	-8.96%	-0.87%	-7.70%
27-Oct-2000	-10.45%	-19.15%	-3.46%	-3.44%
27-Nov-2000	6.44%	24.56%	6.36%	5.3 7%
27-Dec-2000	-2.31%	12.42%	-0.61%	-27.45%
25-Jan-2001	11.67%	-5.00%	-10.24%	23.12%

27-Feb-2001	-6.02%	1.74%	-1.05%	-15.97%
27-Mar-2001	-9.21%	-8.86%	-12.10%	-18.29%
27-Apr-2001	-7.36%	-6.28%	10.45%	-30.45%
25-May-2001	6.93%	4.79%	0.43%	29.07%
27-Jun-2001	-6.78%	-6,06%	-7.07%	-15.31%
27-Jul-2001	-4.69%	-3.64%	-0.53%	2,35%
27-Aug-2001	2.05%	23 .55%	2.67%	7.93%
27-Sep-200	-18.17%	-2.74%	-4.21%	-39.81%
25-Oct-2001	11.29%	-1.64%	2.21%	28.41%
27-Nov-2001	8.78%	-22.79%	0.56%	24.69%
27-Dec-2001	-4.74%	-4.79%	1.32%	4.02%
25-Jan-2002	6.40%	3.84%	-5.16%	-2.33%
Beta	1.0000	0.49735	0.4392	1.5338

UNIT-14 CAPITAL MARKET THEORY

UNIT STRUCTURE

- 14.1 Objectives
- 14.2 Introduction
- 14.3 Concepts Of Risk-Free Asset, Risk-Free Lending And Borrowing
- 14.4 Efficient Set With Risk-Free Lending And Borrowing
- 14.5 Leveraged Portfolio
- 14.6 Market Portfolio
- 14.7 Capital Market Line
- 14.8 Capital Asset Pricing Model(CAPM)
- 14.9 Security Market Line
- 14.10 Arbitrage Pricing Theory
- 14.11 Summary
- 14.12 Self Assessment Questions
- 14.13 Suggested Readings

14.1 OBJECTIVES

After completing this unit you will be able to:

- pinpoint basic tenets and assumptions of Capital Asset Pricing Model (CAPM) define risk free asset, risk free lending, risk free borrowing and leveraged portfolio
- discuss and illustrate the implications of leveraged portfolio for efficient set and Capital Market Line (CML)
- explain and illustrate 'beta' measure of systematic risk and the Security Market Line (SML) that relates the expected return for an asset to its beta
- highlight limitations of CAPM and describe alternative theory namely Arbitrage Pricing Theory (APT) Structure.

14.2 INTRODUCTION

Capital Market Theory sets the environment in which security analysis is performed. Without a well-constructed view of modern capital markets, securities analysis may be a futile activity. A great debate, and great divide, separates the academics, with their efficient market hypothesis, and the practitioners, with their views of market inefficiency. Although the debate appears surreal and unimportant at times, its resolution is immensely critical for conducting effective securities analysis and investing successfully.

The CAPM is commonly confused with portfolio theory. Portfolio theory is simply the use of statistical and mathematical programming techniques to derive optimal tradeoffs between risk and return. Under very restrictive assumptions (rarely found in financial markets), the CAPM is a highly specialized subset of portfolio theory. Even so, the CAPM has become very popular as it provides a logical, common sense tradeoff between risk and return.

In this unit, our endeavor will be to extend the portfolio theory described in the previous two units, to the capital market theory that is concerned with pricing risky assets. In particular, we would like to know if two assets differ with respect to their risk, how will they differ in terms of the price investors are willing to pay or the rate of return investors expect to get from them?

The major implication of the capital market theory is that the expected return of an asset will be related to a measure of risk for that asset, known as 'beta'. The exact manner in which expected return and beta are related is specified by the Capital Asset Pricing Model or CAPM, which was developed in mid-1960s. The model has generally been attributed to Williams Sharpe, but similar independent derivations were, made to by John Linter and Jan Mossin. Consequently, the model is often referred to as Sharpe-Linter-Mossin (SLM) Capital Asset Pricing Model. Although the model has been extensively examined, modified and extended in the literature, the original SLM version of the CAPM still remains the central theme in capital market theory as well as in current practices of investment management.

14.3 CONCEPTS OF RISK-FREE ASSET, RISK-FREE LENDING AND BORROWING

Following the development of Markowitz portfolio model, institutional investors and others started realizing the need for considering the relationship between the stocks in constructing the portfolios. Many of these investors started using sophisticated mathematical models to derive optimal portfolio but always found it difficult to measure the same in view of large number of assets traded in the market. CAPM resolves this problem to an extent by considering investments in risk-free asset. As we will see in this Unit, giving investors these new opportunities will have major impact in the shape and allocation of the efficient set and subsequent portfolio selection. But before we proceed to discuss this aspect, let us get acquainted with the terms like 'risk-free asset', 'risk-free lending' and 'risk-free borrowing'.

Risk-free Asset

Risk-free asset is an asset, which has a certain future return. In other words, a risk-free asset is one for which there is no uncertainty regarding the future returns; that is, the investor knows exactly what the value of the asset will be at the end of the holding period. Thus, variance of returns of a risk-free asset is equal to zero. A good example of such asset is government bonds.

Whether all types of government bonds are risk-free asset? It is difficult to say because long-term government bonds are exposed to certain types of risk like interest rate risk and inflation risk. For instance, if the maturity period of a government security is (say) 15 years, while the investment horizon (or the holding period) of an investor is (say) three- months, then the investor does not really know at what market price he will be able to sell the security at the end of his holding period. Any change in interest-rate structure during the holding period will-influence the market price of the security.

To give an idea, upward revision of interest rate will have a tendency to lower the market price, such that yield-to-maturity at market-price-based acquisition of the security of given maturity period compares well with the yield-to-maturity of new issue with similar maturity period. This is an example of what is termed as 'interest-rate-risk'. Thus, normally, the short-term government securities like Treasury Bills are called risk-free securities. Can corporate debentures be treated as risk-free asset? Certainly not, because risk of default is associated with them in addition to interest rate risk and inflation risk. In fact, corporate bonds have more risk like liquidity risk. However, in relative term, they are better than equity on risk.

As we will see later, these two characteristics of risk-free asset, namely, (a) variance = 0; and (b) covariance of returns with any other asset = 0, are quite significant in determining the shape of efficient frontier.

Risk-Free Lending and Borrowing

Investing in a risk-free asset is frequently referred to as 'risk-free lending', since investment in such assets tantamount to giving loan directly to the government. An investor does not have to depend solely on his own wealth to decide how much to invest in assets. She/he can borrow and invest, i.e., the investor can use financial leverage. However, investor will have to pay interest on borrowed funds and such borrowing is also assumed to have same risk-free interest rate and hence deemed as "risk-free borrowing". Though it may not be practical for an ordinary investor to borrow at risk-free interest rate, it is quiet possible for large funds to borrow at a rate close to risk-free rate.

14.4 EFFICIENT SET WITH RISK-FREE LENDING AND BORROWING

The efficient frontier consists of only risky securities. What happens to the average rate of return and standard deviation of returns when a risk-free asset is combined with a portfolio of risky assets such as exists on the Markowitz efficient frontier?

The expected portfolio return R_p is given by:

$$R_p = X R_f + (1 - X) R_i$$

where,

X = the proportion of the portfolio invested in a risk free asset;

R_f = risk-free rate of return; and

R_i = expected return on risky portfolio 'i'.

The portfolio theory deals with portfolios of risky assets. According to the theory, an investor faces an efficient frontier containing the set of efficient portfolios of risky assets. Now it is assumed that there exists a riskless asset available for investment. A riskless asset is one whose return is certain such as a government security. Since the return is certain, the variability of return or risk is zero. The investor can invest a portion of his funds in the riskless asset which would be equivalent to lending at the risk free asset's rate of return, namely R_f . He would then be investing in a combination of risk free asset and risky assets.

Similarly, it may be assumed that an investor may borrow at the same risk free rate for the purpose of investing in a portfolio of risky assets. He would then be using his own funds as well as some borrowed funds for investment.

The efficient frontier arising from a feasible set of portfolios of risky assets is concave in shape. When an investor is assumed to use riskless lending and borrowing in his investment activity the shape of the efficient frontier transforms into a straight line.

The concave curve ABC (diagram enclosed) represents an efficient frontier of risky portfolios. B is the optimal portfolio in the efficient frontier with w_p per cent and $E(R_p)$. A risk free asset with rate of return R_f is available for investment. The risk or standard deviation of this asset would be zero because it is a riskless asset. Hence, it would be plotted on the Y axis. The investor may lend a part of his money at the riskless rate, i.e. invest in the risk free asset and invest the remaining portion of his funds in a risky portfolio.

If an investor places 40 per cent of his funds in the riskfree asset and the remaining 60 per cent in portfolio B, the return and risk of this combined portfolio O' may be calculated using the following formula:

$$E(R_c) = w_p E(R_p) + (1 - w_p) R_f$$

Where,

$E(R_c)$ is the expected return on combined portfolio

w_p is the fraction invested in the risky asset portfolio.

$E(R_p)$ is the expected return on risky portfolio

$(1 - w_p)$ is the proportion of funds invested in riskless asset

R_f is the rate of return on riskless asset

Test Your Progress-

1. Explain the following:

a. Risk free asset:

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b. Risk free Lending and Borrowing:

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c. Efficient Set:

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14.5 LEVERAGED PORTFOLIO

A Leveraged portfolio is a portfolio that includes risky assets purchased with funds borrowed.

Portfolio leverage needs to be understood and respected before contemplating its use in a portfolio. A leveraged portfolio has both positive as well as negative side. Talking about the negative side – Leveraged increase the company’s risk, as the Leveraged securities may result in loss and even make the company legally responsible to repay the borrowed capital. And let’s talk about the positive side – It provides the company to take advantage of the opportunity it can select with money available by the borrowed funds. It describes the company’s ability to use fixed cost funds to increase the return to the owners (i.e. Equity shareholders). Fixed Cost funds e.g. debentures, Term Loans & preference share which act as the lever i.e. helps the company to lift its amount of capital and as a result the increase in earnings of the owners of the company.

The expected return of a leveraged portfolio, using borrowed money, can be calculated using the formula below. In a leveraged portfolio, the return will be the normal return on investment plus the excess of return on investment minus the cost of debt multiplied by the financial leverage being applied to the investor’s equity capital contributed to the portfolio. The obvious but important thing to understand from this formula is that if the return on investment is not greater than the cost of debt, the use of leverage will result in lower portfolio return.

$$\text{Leveraged Portfolio Return} = \text{Return on Investments} + \left[\frac{\text{Debt}}{\text{Equity}} \times \left[\text{Return on Investments} - \text{Cost of Debt} \right] \right]$$

Note: Using this formula and knowing the leveraged portfolio return, cost of debt, and amount of financial leverage used, we can algebraically solve for the portfolio return of the unleveraged portfolio (ie. return on investment). This creates a fair comparison of portfolio manager skill level in selecting securities, before considering the use of leverage.

14.6 MARKET PORTFOLIO

Every security must be part of the investor's risky portion of the portfolio. The reason is that if a security isn't in T , no one is investing in it, meaning that its prices will fall, causing the expected returns of it to rise until the resulting tangency portfolio has a nonzero proportion associated with them. When all the price adjusting stops, the market will have been brought into equilibrium.

- Each investor will want to hold a certain positive amount of each risky security.
- The current market price of each security will be at a level where the number of shares demanded equals the number of shares outstanding.
- The riskfree rate will be at a level where the total amount of money borrowed equals the total amount of money lent.

This gives rise to the following definition of the *market portfolio*:

Definition- The market portfolio is a portfolio consisting of all securities where the proportion invested in each security corresponds to its relative market value. The relative market value of a security is simply equal to the aggregate market value of the security divided by the sum of the aggregate market values of all securities.

In equilibrium the proportions of the tangency portfolio will correspond to the proportions of the market portfolio. This tells us that the market portfolio plays a central role in the CAPM, since the efficient set consists of an investment in the market portfolio, coupled with a desired amount of either riskfree borrowing or lending.

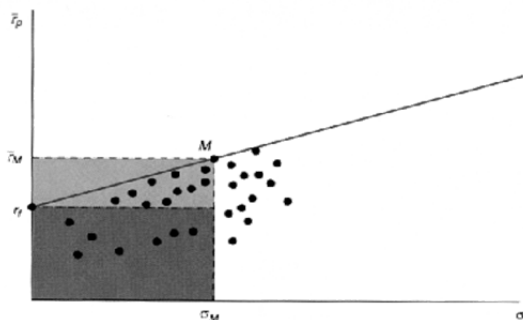


Fig 1: The Capital Market Line. M is the market portfolio and r_f represents the riskfree rate of return. All portfolios other than those employing the market portfolio and riskfree borrowing or lending would lie below the CML.

The linear efficient set of the CAPM is known as the Capital Market Line.

Test Your Progress-

1. What do you mean by a Leveraged Portfolio?

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2. Explain Market Portfolio.

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14.7 CAPITAL MARKET LINE

All investors are assumed to have identical (homogeneous) expectations. Hence, all of them will face the same efficient frontier depicted in the above diagram. Every investor will seek to combine the same risky portfolio B with different levels of lending or borrowing according to his desired level of risk. Because all investors hold the same risky portfolio, then it will include all risky securities in the market. This portfolio of all risky securities is referred to as the market portfolio M. Each security will be held in the proportion which the market value of the security bears to the total market value of all risky securities in the market. All investors will hold combinations of only two assets, the market portfolio and a riskless security.

All these combinations will lie along the straight line representing the efficient frontier. This line formed by the action of all investors mixing the market portfolio with the risk free asset is known as the capital market line (CML). All efficient portfolios of all investors will lie along this capital market line.

The relationship between the return and risk of any efficient portfolio on the capital market line can be expressed in the form of the following equation:

$$ER_p = R_f + SD_p \times \frac{ER_m - R_f}{SD_m}$$

where,

- ER_p = Expected Return of Portfolio
- R_f = Risk-Free Rate

- SD_p = Standard Deviation of Portfolio
- ER_m = Expected Return of the Market
- SD_m = Standard Deviation of Market

Thus, the expected return on an efficient portfolio is:

$$\text{(Expected return)} = \text{(Price of time)} + \text{(Price of risk)} \text{ (Amount of risk)}$$

The CML provides a risk return relationship and a measure of risk for efficient portfolios. The appropriate measure of risk for an efficient portfolio is the standard deviation of return of the portfolio. There is a linear relationship between the risk as measured by the standard deviation and the expected return for these efficient portfolios.

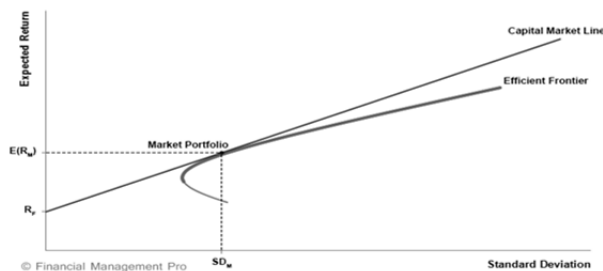


Fig.2 Capital Market Line

Assumptions Of Capital Market Line

There are certain assumptions in the Capital Market Theory, which hold true for the CML also.

- **Frictionless Markets** – The theory assumes the existence of frictionless markets. This means that there are no transaction costs or taxes applicable to such transactions. It assumes that investors can smoothly conduct transactions in the market without incurring any additional costs.
- **No Limits on Short Selling** – Short selling is when you borrow securities and sell them with an expectation of the securities' price going down. Capital Market Theory assumes that there are no limits on the usage of the funds received from short selling.
- **Rational Investors** – The Capital Market Theory assumes that investors are rational, and they take a decision after assessing risk-return. It assumes that the investors are informed and make decisions after careful analysis.
- **Homogenous Expectation** – Investors have the same expectations of future returns in their portfolio. Given the 3 basic inputs of the portfolio model for calculating future returns, all investors will come up with the same efficient frontier. Since the risk-free asset remains the same, the tangency point, which represents the Market Portfolio, will be the obvious choice of all investors.

Illustration 1.

Suppose that the current risk-free rate is 5%, and the expected market return is 18%. The standard deviation of the market portfolio is 10%.

Now let's take two portfolios, with different Standard Deviations:

- Portfolio A = 5%
- Portfolio B = 15%

Using the Capital Market Line Formula,

Calculation of Expected Return of Portfolio A.

		B
Using Capital Market Line Equation		=B1+B4*(B2-B1)/B3
1	Risk Free Rate	5%
2	Market Return	18%
3	SD of Market Portfolio	10%
4	SD of Portfolio A	5%
5	SD of Portfolio B	15%
6	Expected Return of Portfolio A	11.5%
7		

- = 5% + 5% * (18% - 5%) / 10%
- **ER(A) = 11.5%**

Calculation of Expected Return of Portfolio B

		B
Using Capital Market Line Equation		=B1+B5*(B2-B1)/B3
1	Risk Free Rate	5%
2	Market Return	18%
3	SD of Market Portfolio	10%
4	SD of Portfolio A	5%
5	SD of Portfolio B	15%
6	Expected Return of Portfolio B	24.5%
7		

- = 5% + 15% (18% - 5%) / 10%
- **ER(B) = 24.5%**

As we increase the risk in the portfolio (moving up along the Capital Market Line), the expected return increases. The same is true vice-versa. But the excess return per unit of risk, which is the Sharpe ratio, remains the same. It means that the capital market line represents different combinations of assets for a specific Sharpe ratio.

14.8 CAPITAL ASSET PRICING MODEL(CAPM)

In this section, we turn to the basic Capital Asset Pricing Model developed by Sharpe, Linter and Mossin. We present here a descriptive model of how assets are priced.

The CAPM model describes the relationship between risk and expected return, and serves as a model for the pricing of risky securities. CAPM says that the expected return of a security or a portfolio equals the rate on a risk-free security plus a risk premium. If this expected return does not meet or beat required return then the investment should not be undertaken.

The formula for calculating the expected return of an asset given its risk is as follows:

$$ER_i = R_f + \beta_i(ER_m - R_f)$$

Where

ER_i = expected return of investment

R_f = risk-free rate

β_i = beta of the investment

$(ER_m - R_f)$ = market risk premium

The CAPM builds upon the Markowitz portfolio model and capital market line. Obviously, it pre-supposes all the assumptions stated earlier at appropriate places (including those stated in the previous two Units). Besides, the model itself adds few more assumptions. So, let us begin our discussion of the CAPM by putting together all the assumptions of the model at one place.

Assumptions-

1. Investors evaluate portfolios by looking at expected returns and standard deviations of those portfolios over a one-period horizon.
2. Investors, when given a choice, between two otherwise identical portfolios, will choose the one with higher expected return.
3. Investors, when given a choice, between two otherwise identical portfolios, will choose the one with the lower standard deviation or risk.
4. Individual assets are infinitely divisible, meaning that an investor can buy a fraction of a share if he or she so desires.
5. There is a risk-free rate at which an investor may either lend money or borrow money.
6. Taxes and transaction costs are irrelevant.
7. All investors have the same one-period horizon.
8. The risk-free rate is the same for all investors.

- Information is freely and instantly available to all investors.
- Investors have homogeneous expectations, meaning that they have the same perceptions in regard to the expected returns, standard deviations and covariance of returns between any two assets.

Needless to say, many of these assumptions are unrealistic, and one may very well wonder how useful a model can be that is based on them. But, then assumptions are necessary in building a model, and we should not be so much concerned about the assumptions as we should be about how well the model explains the relationships that exist in the real world. In fact, several authors have shown that many of the above assumptions can be relaxed with minor impact on the CAPM and no change in the overall concept of the model.

Illustration-

Let’s calculate the expected return on a stock, using the Capital Asset Pricing Model (CAPM) formula.

- Suppose the following information about a stock is known:
 - It trades on the NYSE and its operations are based in the United States
 - Current yield on a U.S. 10-year treasury is 2.5%
 - The average excess historical annual return for U.S. stocks is 7.5%
 - The beta of the stock is 1.25 (meaning its average return is 1.25x as volatile as the S&P500 over the last 2 years)

What is the expected return of the security using the CAPM formula?

Let’s break down the answer using the formula from above in the article:

- Expected return = Risk Free Rate + [Beta x Market Return Premium]
- Expected return = 2.5% + [1.25 x 7.5%]
- Expected return = 11.9%

Test Your Progress-

- Explain Capital Market Line. List any two assumptions.

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2. Explain CAPM. List any five assumptions of CAPM.

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14.9 SECURITY MARKET LINE

The CML shows the risk-return relationship for all efficient portfolios. They would all lie along the capital market line. All portfolios other than the efficient ones will lie below the capital market line. The CML does not describe the risk-return relationship of inefficient portfolios or of individual securities. The capital asset pricing model specifies the relationship between expected return and risk for all securities and all portfolios, whether efficient or inefficient.

The total risk of a security as measured by standard deviation is composed of two components: systematic risk and unsystematic risk or diversifiable risk. As investment is diversified and more and more securities are added to a portfolio, the unsystematic risk is reduced. For a very well diversified portfolio, unsystematic risk tends to become zero and the only relevant risk is systematic risk measured by beta (β). Hence, it is argued that the correct measure of a security's risk is beta.

It follows that the expected return of a security or of a portfolio should be related to the risk of that security or portfolio as measured by β . Beta is a measure of the security's sensitivity to changes in market return. Beta value greater than one indicates higher sensitivity to market changes, whereas beta value less than one indicates lower sensitivity to market changes. A β value of one indicates that the security moves at the same rate and in the same direction as the market. Thus, the β of the market may be taken as one.

The relationship between expected return and β of a security can be determined graphically. Let us consider an XY graph where expected returns are plotted on the Y axis and beta coefficients are plotted on the X axis. A risk free asset has an expected return equivalent to R_f and beta coefficient of zero. The market portfolio M has a beta coefficient of one and expected return equivalent to R_m . A straight line joining these two points is known as the security market line (SML). This is illustrated in the following diagram.

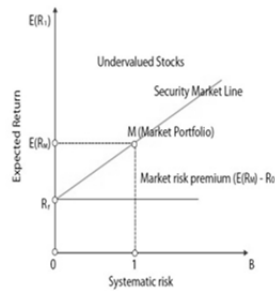


Fig.3 Security Market Line

The security market line provides the relationship between the expected return and beta of a security or portfolio. This relationship can be expressed in the form of the following equation:

$$E(R_i) = R_f + \beta_i [E(R_M) - R_f]$$

Where,

- $E(R_i)$ is the expected return on the security
- R_f is the risk-free rate and represents the y-intercept of the SML
- β_i is a non-diversifiable or systematic risk. It is the most crucial factor in SML.
- $E(R_M)$ is expected to return on market portfolio M.
- $E(R_M) - R_f$ is known as Market Risk Premium

Thus,

Expected return on a security = Risk free return + (Beta * Risk premium of market)

Assumptions Of SML-

Since the security market line is a graphical representation of the capital asset pricing model (CAPM), the assumptions for CAPM also hold for SML. Most commonly, CAPM is a one-factor model that is only based on the level of systematic risk a security is exposed to.

The larger the level of systematic risk, the larger the expected return for the security is – more risk equals more reward. It is a linear relationship and explains why the security market line is a straight line. However, very broad assumptions need to be made for a one-factor model to be upheld. Below are some SML assumptions:

- All market participants are price takers and cannot affect the price of a security.
- The investment horizon for all investors is the same.
- There are no short sales.

- There are no taxes or transaction costs.
- There is only one risk-free asset.
- There are multiple risky assets.
- All market participants are rational.

Illustration-

Let us understand SLM with the help of an example:

1. Let the risk-free rate be 5%, and the expected market return is 14%. Consider two securities, one with a beta coefficient of 0.5 and other with the beta coefficient of 1.5 with respect to the market index.

Now let's understand the security market line example, calculating the expected return for each security using SML:

The expected return for Security A as per the security market line equation is as per below.

- $E(R_A) = R_f + \beta_i [E(R_M) - R_f]$
- $E(R_A) = 5 + 0.5 [14 - 5]$
- $E(R_A) = 5 + 0.5 \times 9 = 9.5\%$

Expected return for Security B:

- $E(R_B) = R_f + \beta_i [E(R_M) - R_f]$
- $E(R_B) = 5 + 1.5 [14 - 5]$
- $E(R_B) = 5 + 1.5 \times 9 = 18.5\%$

Thus, as can be seen above, Security A has a lower beta; therefore, it has a lower expected return while security B has a higher beta coefficient and has a higher expected return. It is in line with the general finance theory of higher risk higher expected return.

14.10 ARBITRAGE PRICING THEORY

As noted above, at the core of APT is the recognition that several systematic factors affect security returns. It is possible to see that the actual return, R , on any security or portfolio may be broken down into three constituent parts, as follows:

$$R = E + bf + e$$

where:

E = expected return on the security

b = security's sensitivity to change in the systematic factor

f = the actual return on the systematic factor

e = returns on the unsystematic factors

The above Equation merely states that the actual return equals the expected return, plus factor sensitivity times factor movement, plus residual risk. The subtler rationale and mathematics of APT are left out here. The empirical work suggests that a three or four - factor model adequately captures the influence of systematic factors on stock - market returns. The APT Equation may thus be expanded to :

$$R = E + (b_1) (f_1) + (b_2) (f_2) + (b_3) (f_3) + (b_4) (f_4) + e$$

Each of the four middle terms in this equation is the product of the returns on a particular economic factor and the given stock's sensitivity to that factor. What are these factors and separating unanticipated from anticipated factor movements in the measurement of sensitivities is perhaps the biggest problem in APT. Some of the factors empirically found to be useful in measuring risk are:

1. Changes in expected inflation, unanticipated changes in inflation, industrial production, default-risk premium and term structure of interest rates (Roll & Ross, J FE, Mar 77)
2. Default risk, term structure of interest rates, inflation, long term expected growth rate of profits for the economy, and residual market risk (Berry, FAJ, Mar-Apr 88)

It may be noted that CAPM and APT are different variants of the true equilibrium pricing model. Both are, therefore, useful in supplying intuition into the way security prices and equilibrium returns are established.

Test Your Progress

1. Explain the following:

- a. Security Market line:

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- b. Arbitrage Pricing Theory:

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14.11 SUMMARY

In this Unit, we have discussed the basic levels and assumptions of Capital Asset Pricing Model (CAPM). The Concepts of risk free asset, risk free lending, risk free borrowing, leveraged portfolio, market Portfolio, Capital Market Line (CML), Security Market Line (SML) and beta have been explained and illustrated at length. This Unit also pinpoints the limitations CAPM and introduces arbitrage pricing theory (APT) and concludes that till concrete research results become available to the contrary, both CAPM and APT could be regarded useful, at least intuitively, to guide investors and portfolio managers for pricing the risky assets like equities.

14.12 SELF ASSESSMENT QUESTIONS

1. What are the assumptions of capital market theory?
2. What is the importance of capital market theory?
3. Define risk free asset. List out two risk free assets.
4. Explain the following in detail:
 - a. Capital Market Line
 - b. Security Market Line.
5. Compare and contrast Capital Market Line (CML) and Security Market Line (SML).
6. What are the basic assumptions underlying Capital Asset Pricing Model?
7. Define efficient frontier. What happens to the Capital Market Line and the choice of an optimal portfolio if borrowing rate is allowed to exceed the lending rate?
8. Define leveraged portfolio and bring out its implications for capital market line.
9. Explain Market Portfolio.
10. What do you mean by Arbitrage Pricing Theory?
11. Compare and contrast CAPM and APT. Which of the two is a better model for pricing risky assets and why?
12. What specifically should a 'true believer' in the CAPM do with her money if she seeks to hold a portfolio with a beta of 1.5?
13. The following data are available to you as a portfolio manager:

Security	Expected Return	Beta	Standard Deviation
A	.30	2.0	.50
B	.25	1.5	.40
C	.20	1.0	.30
D	.18	.8	.25
E	.15	.5	.20

- a. Draw a security market line. In terms of the security market line, which of the securities listed above are undervalued? Why?
 - b. Assuming that a portfolio is constructed using equal proportions of the five stocks listed above, calculate the expected return and risk of such a portfolio.
14. Compare and contrast standard deviation and beta as measure of stock and portfolio risks.

14.13 SUGGESTED READINGS

Fischer, Donald E, and Ronald J. Jordon 1995, Security Analysis and Portfolio Management, 6th ed., PHI, New Delhi

Nancy, Efficient? Chaotic? What is the New Finance? Harvard Business Review, March-April, 1993.

UNIT-15 PORTFOLIO REVISION

UNIT STRUCTURE

- 15.0 Objectives
- 15.1 Introduction
- 15.2 Meaning Of Portfolio Revision
- 15.3 Need For Portfolio Revision
- 15.4 Portfolio Revision Strategies
- 15.5 Portfolio Revision Practices
- 15.6 Constraints In Portfolio Revision
- 15.7 Formula Plans
- 15.8 Basic Assumptions And Ground Rules
- 15.9 Constant-Ratio-Plan
- 15.10 Variable-Ratio Plan
- 15.11 Summary
- 15.12 Self Assessment Questions
- 15.12 Suggested Readings

15.0 OBJECTIVES

The objectives of this unit are to:

- Understand need for Portfolio Revision
- Contrast 'active' and 'passive' portfolio revision strategies
- Highlight portfolio revision practices and the constraints in portfolio revision.
- Discuss and illustrate formula plans for portfolio revision.

15.1 INTRODUCTION

Portfolio Revision-

The process of addition of more assets in an existing portfolio or changing the ratio of funds invested is called as portfolio revision.

The sale and purchase of assets in an existing portfolio over a certain period of time to maximize returns and minimize risk is called as Portfolio revision.

The art of changing the mix of securities in a portfolio is called as portfolio revision.

15.2 MEANING OF PORTFOLIO REVISION:

Most investors are comfortable with buying securities but spend little effort in revising portfolio or selling stocks. In that process they lose opportunities to earn good return. In the entire process of portfolio management, portfolio revision is as important as portfolio analysis and selection. Keeping in mind the risk-return objective, an investor selects a mix of securities from the given investment universe. In a dynamic world of investment, it is only natural that the portfolio may not perform as desired or opportunities might arise turning the desired into less than desired. Further, some of the risk and return estimation might change over a period of time. In every such situation, a portfolio revision is warranted. Portfolio revision involves changing the existing mix of securities.

The objective of portfolio revision is similar to the objective of portfolio selection i.e., maximizing the return for a given level of risk or minimising the risk for a given level of return. The process of portfolio revision is also similar to the process of portfolio selection. This is particularly true where active portfolio revision strategy is followed. It calls for reallocation of funds between bond and stock market through economic analysis, reallocation of funds among different industries through industry analysis and finally selling and buying of stocks within the industry through company analysis. Where passive portfolio revision strategy is followed, use of mechanical formula plans may be made. What are these formula plans? We shall discuss these and other aspects of portfolio revision in this Unit. Let us begin by highlighting the need for portfolio revision.

15.3 NEED FOR PORTFOLIO REVISION:

No plan can be perfect to the extent that it would not need revision sooner or later. Investment Plans are certainly not. In the context of portfolio management the need for revision is even more because the financial markets are continually changing.

Thus the need for portfolio revision might simply arise because market witnessed some significant changes since the creation of the portfolio. Further, the need for portfolio revision may arise because of some investor-related factors such as (i) availability of additional wealth, (ii) change in the risk attitude and the utility function of the investor, (iii) change in the investment goals of the investors and (iv) the need to liquidate a part of the portfolio to provide funds for some alternative uses. The other valid reasons for portfolio revision such as short-term price fluctuations in the market do also exist. There are thus numerous factors, which may be broadly called market related and investor related.

15.4 PORTFOLIO REVISION STRATEGIES:

Broadly speaking investors may, depending on their investment objectives skill and resources, follow 'active' or 'passive' strategies for portfolio revision. Active strategy of portfolio revision involves a process similar to portfolio analysis and selection which is based on an analysis of fundamental factors covering economy, industries and companies as well as technical factors. As against this, under passive strategy some kind of formula plans are followed for revision.

There are two types of Portfolio Revision Strategies.

1. **Active Revision Strategy:** Active revision strategy seeks 'beating the market by anticipating' or reacting to the perceived events or information. It involves frequent changes in an existing portfolio over a certain period of time for maximum returns and minimum risks.

Active Revision Strategy helps a portfolio manager to sell and purchase securities on a regular basis for portfolio revision.

3. **Passive Revision Strategy:** Passive Revision Strategy seeks 'performing as the market' It involves rare changes in portfolio only under certain predetermined rules. These predefined rules are known as formula plans.

According to passive revision strategy a portfolio manager can bring changes in the portfolio as per the formula plans only.

Active revision strategy seeks 'beating the market by anticipating' or reacting to the perceived events or information. Passive revision strategy, on the other hand, seeks 'performing as the market'. The followers of active revision strategy are found among believers in the "market inefficiency" whereas passive revision strategy is the choice of believers in the 'market efficiency'. However, some of the formula strategies are on the premise of market inefficiency. The frequency of trading transactions, as is obvious, will be more under active revision strategy than under passive revision strategy and so will be the time, money and resources required for implementing active revision strategy than for passive revision strategy. In other words, active and passive revision strategies differ in terms of purpose, process and cost involved. The choice between the two strategies is certainly not very straight forward. One has to compare relevant costs and benefits. On the face of it, active revision strategy might appear quite appealing but in actual practice, there exist a number of constraints in undertaking portfolio revision itself.

Test Your Progress-

1. Define Portfolio Revision.

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2. Name two broad sets of factors which may motivate portfolio revision.

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3. Distinguish between 'active' and 'passive' strategies of portfolio revision.

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15.5 PORTFOLIO REVISION PRACTICES :

Investors follow both active and passive portfolio revision strategies. Studies about portfolio revision strategies show that the efficient market hypothesis is slowly but continuously gaining and investors revise their portfolio much less often than they were doing previously because of their rising faith in market efficiency. Institutional investors on the other hand have shown definite tendency in the recent past for active revision of their portfolios and most often to correct their past mistakes. For instance, Morgan Stanley mutual funds in India has made major revision in the last few years to reduce the size of the portfolio since the fund invested initially in about 500 stocks. In a volatile market, many funds feel that without such revision, it would be difficult to show better performance. This is said to be motivated by their desire to achieve superior performance by frequent trading to take advantage of their supposedly superior investment skills.

Some research studies undertaken in U.S. about the market timing and portfolio revision suggested as follows:

- F. Black (1973) found that monthly and weekly revision could be a rewarding strategy though when transactions costs were considered the results were less impressive, but, of course, still significantly positive.
- H.A. Latane, et. Al. (1974) concluded that complete portfolio revision every six months would have been a rewarding strategy.
- Sharpe (1975) contradicts some of the earlier notions on active portfolio revision. According to Sharpe, a manager, who attempts to time the market must be right roughly three times out of four, in order to outperform the buy- and-hold portfolio. If the manager is right less often, the relative performance will be inferior because of transaction costs and the manager will often have funds in cash equivalents when they could be earning the higher returns available from common stock.

Many private sector mutual funds in Indian market have become very active in portfolio revision.

15.6 CONSTRAINTS IN PORTFOLIO REVISION:

A look into the portfolio revision practices as discussed above highlight that there are number of constraints in portfolio revision, in general, and active portfolio revision, in particular. Let us indicate some common constraints in portfolio revision as follows:

Transaction Cost: As you know buying and selling of securities involve transaction cost including brokers' fee. Frequent buying and selling for portfolio revision may push up transaction costs beyond gainful limits.

Taxes: In most of the countries, capital gains are taxed at concessional rates. But for any income to qualify as capital gains, it should be earned after lapse of a certain period. To qualify such concessional rate of 10% tax, investors today need to wait for one year after the purchase. The minimum period required to qualify for long-term capital gain is one year for financial assets. Frequent selling for portfolio revision may mean foregoing capital gains tax concession. Higher the tax differential (between rates of tax for income and capital gains), higher the constraint. Even for tax switches, which means that one stock is sold to establish a tax loss and a comparable security is purchased to replace it in the investor's portfolio, one must wait for a minimum period after selling a stock and before repurchasing it, to be able to declare the gain or loss. If the stock is repurchased before the minimum fixed period, it is considered a *wash sale*, and no gain or loss can be claimed for tax purpose.

Statutory Stipulations: In many countries including India, statutory stipulations have been made as to the percentage of investible funds that can be invested by investment companies/mutual funds in the shares/debentures of a company or industry. In such a situation, the initiative to revise portfolio is most likely to get stifled under the burden of various stipulations. Government owned investment companies and mutual funds are quite often called upon to support sagging

markets (albeit counters) or cool down heated markets, which puts limit on the active portfolio revision by these companies.

No Single Formula: Portfolio revision is no exact science. Even today there does not exist clear cut answer to the overall question of whether, when and how to revise a portfolio. The entire process is fairly cumbersome and time-consuming. The investment literature do provide some formula plans, which we shall discuss in the following section, but they have their own assumptions and limitations.

Test Your Progress-

1. List out three constraints in portfolio revision.

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2. Define the following:

- a. wash sale:

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- b. tax switches :

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2. Examine four quarterly disclosure of any mutual fund scheme. Examine the portfolio held by the fund at the end of each quarter and find out the extent of revision that the fund has made during the four quarters.

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15.7 FORMULA PLANS

As noticed above, the problem of portfolio revision essentially boils down to timing the buying and selling the securities. Ideally, investors should buy when prices are low, and then sell these securities when their prices are high. But as stock prices fluctuate, the natural tendencies of investors often cause them to react in a way opposite to one that would enable them to benefit from these fluctuations.

Investors are hesitant to buy when prices are low for fear that prices will fall further lower, or for fear that prices won't move upward again. When prices are high, investors are hesitant to sell because they feel that prices may rise further and they may realise larger profits. It requires skill and discipline to buy when stock prices are low and pessimism abounds and to sell when stock prices are high and optimism prevails.

Mechanical portfolio revision techniques have been developed to ease the problem of whether and when to revise to achieve the benefits of buying stocks when prices are low and selling stocks when prices are high. These techniques are referred to as formula plans. There are three popular formula plans namely, Constant-Dollar-Value Plan, Constant Ratio Plan and Variable Ratio Plan.

Before discussing each one of these, let us understand the basic assumptions and ground rules of formula plans.

15.7 BASIC ASSUMPTIONS AND GROUND RULES :

The Formula Plans are based on the following assumptions:

The stock prices and the high grade bond prices move in the opposite directions.

The investors cannot or are not inclined to forecast direction of the next fluctuation in stock prices which may be due to lack of skill and resources or their belief in market efficiency or both.

The use of formula plans call for the investor to divide his investment funds into two portfolios, one aggressive and the other conservative or defensive. The aggressive portfolio usually consists of stocks while conservative portfolio consists of bonds.

The formula plans specify pre-designated rules for the transfer of funds from the aggressive into the conservative and vice-versa such that it automatically causes the investor to sell stocks when their prices are rising and buy stocks when their prices are falling. Let us now discuss, one by one, the three formula plans.

15.8 CONSTANT-DOLLAR-VALUE PLAN

The constant ratio plan was one of the first plans devised when institutions started to invest in the stock market. The plan is often called rebalancing. The Plan (CDVP) asserts that the dollar value (or Rupee Value in Indian Context) of the stock portion of the portfolio will remain constant. This, in operational terms, would mean that as the value of the stocks rises, the investor must automatically sell some of the shares to keep the value of his aggressive portfolio constant. If, on the other hand, the prices of the stocks fall, the investor must buy additional stocks to keep the value of the aggressive portfolio constant. By specifying that the aggressive portfolio will remain constant in dollar value, the plan implies that the remainder of the total fund will be invested in the conservative fund. In order to implement this plan, an important question to answer is what will be the action points? Or, in other words, when will the investor make the transfer called for to keep the dollar value of the aggressive portfolio constant? Will it be made with every change in the prices of the stocks comprising the aggressive portfolio? Or, will it be set according to pre- specified periods of time or percentage change in some economic or market index or percentage change in the value of the aggressive portfolio?

The investor must choose pre-determined action points, also called revaluation points, very carefully. The action points can have significant effect on the returns of the investor. . Action points placed at every change or too close would cause excessive transaction costs that reduce return and the action points placed too far apart may cause the loss of opportunity to profit from fluctuations that take place between them. Let us take an example to clarify the working of constant-dollar-value-plan.

Assume an investor has Rs. 20,000 and she divides the investments in two equal parts of Rs. 10,000 each. The first part was invested in bonds and the second one was invested in equity shares. She watches price movements of stocks and bonds regularly and decides to sell the shares if the equity portfolio wealth appreciated more than 20% of initial investment of Rs. 10,000 (i.e. Rs. 12,000) and invest the sale proceeds in bonds. Similarly, if the equity portfolio depreciates by 20% of initial wealth of Rs. 10,000 (i.e. Rs. 8,000), she will transfer Rs. 2,000 from bonds (by selling bonds) to equity and by buying equity so that the equity part will be brought back to Rs. 10,000. In other words, the action point is when the equity portfolio appreciates or depreciates by 20%.

In Table 15.1, for an assumed stock price, we have illustrated the portfolio revision strategy. Note all formula plans will offer a desired results over a longer period of time.

Table 15.1: Example of a Constant-Dollar-Value Formula Plan

1 Stock Price Index	2 Value of Buy- and- hold Strategy (Rs.) (800 shares x col.1) (Rs.)	Constant-Dollar-Value Formula			6 Action Points & Actions	7 Total No. of shares in Formula Plan
		3 Value of Conservative Portfolio (Col.5- Col.4) (Rs.)	4 Value of Aggressive Portfolio (Col. 7xCol. 1) (Rs.)	5 Total value (Col. 3 + Col. 4) (Rs.)		
25	20,000	10,000	10,000	20,000		400
22	17,600	10,000	8,800	18,800		400
20	16,000	10,000	8,000	18,000		400
20	16,000	8,000	10,000	18,000	Buy 100 shares at Rs.20*	500
22	17,600	8,000	11,000	19,000		500
24	19,200	8,000	12,000	20,000		500
24	19,200	10,000	10,000	20,000	Sell 83.34 shares at Rs. 24	416.7
26	20,800	10,000	10,830	20,830		416.7

28.8	23,040	10,000	12,000	22,000		416.7
28.8	23,080	12,000	10,000	22,000	Sell Rs. 69.5 shares at Rs. 28.8	347.2
25	20,000	12,000	87,00	20,700		347.2

To restore the stock portfolio to Rs.10,000, Rs.2,000 is transferred from the conservative ' portfolio and used to purchase 100 shares at Rs.20 per share.

In our example, an investor with Rs.20,000 for investment decides that the constant dollar (Rupee) value of her aggressive portfolio will be Rs.10,000. The balance of Rs.10,000 will make up her conservative portfolio at the beginning. She purchases 400 shares selling at Rs.25 per share. She also determines that she will take action to transfer funds from aggressive portfolio to conservative portfolio *or* vice-versa each time the value of her aggressive portfolio reaches 20 per cent above or below the constant value of Rs. 10,000.

Table 15.1 shows the positions and actions of the investor during the complete cycle of the price fluctuations of stocks comprising the portfolio. Although the example refers to the investment in one stock, the concepts are identical for a portfolio of stocks, as the value change will be for the total portfolio. In this example, we have used fractional shares and have ignored transaction costs to simply the example.

In order to highlight the revaluation actions of our investor, we have shown them 'boxed' in Table 15.1. The value of the buy- and-hold strategy is shown in column (2) to enable comparison with the total value of our investors' portfolio [column (5)] as per constant-dollar-value plan of portfolio revision. Notice the revaluation actions (represented by boxed areas in Table 15.1) taken when the price fluctuated to Rs.20, 24, and 28.8, since the value of the aggressive fund become 20 percent greater or less than the constant value of Rs.10,000. Notice also that the investor using the constant-dollar-value formula plan has increased the total value of his fund to Rs.20,700 after the complete cycle while the buy-and-hold strategy yielded only Rs.20,000. Let us now illustrate another formula plan, namely, constant-ratio-plan.

15.8 CONSTANT-RATIO-PLAN

A constant ratio plan is a strategic asset allocation strategy, which keeps the aggressive and conservative portions of a portfolio set at a fixed ratio. When the actual ratio of holdings differs from the desired ratio by a predetermined amount, transactions are made to rebalance the portfolio.

The constant-ratio plan specifies that the value of the aggressive portfolio to the value of the conservative portfolio will be held constant at the pre-determined ratio. This plan automatically forces the investor to sell stocks as their prices rise, in order to keep the ratio of the value of their aggressive portfolio to the value of the conservative portfolio constant.

Table 13.2: Example of Constant-Ratio Formula Plan

1	2	Value of Constant-Ratio Plan			6	7
		3	4	5		
Stock Price Index	Value of Buy-and-hold Strategy (Rs.) (800 shares x coal) (Rs.)	Value of Conservative Portfolio (Col. 5- Col.4) (Rs)	Value of Aggressive Portfolio (Col. 8xCol.1) (Rs)	Total value (Col. 3 + Col. 4) (Rs.)	Ratio & Actions	Total No. of shares in Formula Plan
25	20,000	10,000	10,000	20,000	1.00	400
23	18,400	10,000	9,200	19,200	0.92	400
22.5	18,000	10,000	9,000	19,000	0.90	400
22.5	16,200	9,500	9,500	19,000	1.00 Buy 22.2 at Rs 22.5*	422.2
20.25	16,200	9,500	8,540	18,040	0.90	422.2
20.25	16,000	9,020	9,020	18,040	1.00 Buy 23.7 at Rs.20.25	445.9
20	17,920	9,020	8,910	17,930	0.99	445.9

22.4	17,920	9,020	9,920	18,940	1.10	445.9
22.4	19,920	9,470	9,470	18,940	1.00	425.8
					Sell 20.1 at Rs. 22.4	
24.6	23,080	9,470	10,430	19,900	1.10	425.8

To restore the ratio from .90 to 1.00, total value of the fund, Rs.19,000, is simply split in two equal segments of Rs.9,500, and Rs.9500/9,500=1.00. The Rs.500 transferred from the conservative portfolio will buy 22.2 Shares at the prevailing price of Rs.22.50.

Likewise, the investor is forced to transfer funds from conservative portfolio to aggressive portfolio as the price of stocks fall. We may clarify the operation of this plan with the help of an example. For the sake of our example, the starting point and other information are the same as in the previous example. The desired ratio is 1:1. The initial fund of Rs.20,000 is thus divided into equal portfolios of Rs.10,000 each. The action points are pre-determined at $\pm .10$ from the desired ratio of 1.00. Table 15.2 shows, in boxes, the actions taken by our investor to readjust the value of the two portfolios to re-obtain the desired ratio.

You may notice that the constant-ratio plan calls for more transactions than the constant -dollar-value plan did, but the actions triggered by this plan are less aggressive. This plan yielded an increase in total value at the end of the cycle compared with the total value yielded under constant-dollar-value plan. It did, however, outperform the buy-and-hold strategy.

Let us now explain and illustrate variable-ratio plan.

15.9 VARIABLE-RATIO PLAN

Variable-ratio plan is a more flexible variation of constant ratio plan. Under the variable ratio plan, it is provided that if the value of aggressive portfolio changes by certain percentage or more, the initial ratio between the aggressive portfolio and conservative portfolio will be allowed to change as per the pre-determined schedule. Some variations of this plan provide for the ratios to vary according to economic or market indices rather than the value of the aggressive portfolio. Still others use moving averages of indicators. In order to illustrate the working of variable ratio plan let us continue with the previous example with the following modifications:

The variable-ratio plan states that if the value of the aggressive portfolio rises by 20 per cent or more from the present price of Rs.25, the appropriate ratio of the aggressive portfolio will be 3:7 instead of the initial ratio of 1:1 Likewise, if the value of the aggressive portfolio decreases by 20 per cent or more from the

present price of Rs.25, the appropriate percentage of aggressive portfolio to conservative portfolio will be 7:3. Table 15.3 presents, in boxes, the actions taken by our investor to readjust the value of the aggressive portfolio as per variable-ratio plan.

Table 13.3: Example of Variable-Ratio Formula Plan

1	2	3	4	5	6	7	8
Stock Price	Value of Buy-and-hold Strategy (Rs.)	Value of Conservative Portfolio (Rs.)	Value of Aggressive Portfolio (Rs.)	Total value (Col. 3 + Col. 4)	Value of Stock as % of Total Fund (Col. 4 + Col. 5)	Revaluation Action	Total No. of Shares in Aggressive Portfolio
25	20,000	10,000	10,000	20,000	50%		400
22	17,600	10,000	8,800	18,800	47%		400
20	16,000	10,000	8,000	18,000	44.5%		400
20	16,000	5,400	12,600	18,000	70%	Buy 230 shares at	630

						Rs.20	
22	17,600	5,400	13,860	19,260	72%		630
25	20,000	5,400	15,760	21,160	74.5%		630
25	20,000	10,580	10,580	21160	50%	Sell 207 share s at Rs.25	423
26	20,800	10,580	11,000	20,580	53%		423
28.8	23,040	10,580	12,180	22,760	54%		423
25	20,000	10,580	10,580	21,160	50%		423

You may notice that the increase in the total value of the portfolio after the complete cycle under this plan is Rs. 1,160, which is greater than the increase registered under the other two formula plans. The revaluation actions/transactions undertaken are also fewer under this plan compared to other two plans. Variable ratio plan may thus be more profitable compared to constant-dollar-value plan and the constant-ratio plan.

But, as is obvious, variable ratio plan demands more forecasting than the other formula plans. You must have observed, the variable ratio plan requires forecasting of the range of fluctuations both above and below the initial price (or say median price) to establish the varying ratios at different levels of portfolio values. Beyond a point, it might become questionable as to whether the variable ratio plan is less complicated than the extensive analysis and forecasting that it was supposed to replace.

15.10 LIMITATIONS

Indeed, none of the formula plans are a royal road to riches,

First, as an effort to provide mechanical rules for portfolio revision, they make no provision for what securities should be selected for investment. **Second**, formula plans by their nature are inflexibility makes it difficult to know if and when to adjust the plan to new conditions emerging in the investment environment. **Finally**, in the absence of much faith in the market efficiency, particularly in the development stock markets, there may not be many followers of formula plans for portfolio revision.

Test Your Progress-

1. Explain the following:

a. Constant-Dollar-Value Plan

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b. Constant Ratio Plan

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c. Variable Ratio Plan.

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2. What is the total value of the portfolios at the end of the complete cycle under Constant . Dollar Value Plan, Constant Ratio Plan and Variable Ratio Plan in the examples given above.

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3. Comment on the differences, if any?

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15.11 SUMMARY

In this Unit, we have noticed that in the entire process of portfolio management, portfolio revision, which involves changing the existing mix of securities, is as important as portfolio analysis and selection. The portfolio revision strategies adopted by investors can be broadly classified as 'active' and 'passive' revision strategies.

This Unit also points out that while both 'active and 'passive' revision strategies are followed by believers of market efficiency or those, who lack portfolio analysis and selection skills and resources. Major constraints, which come in the way of portfolio revision, are transaction costs, taxes, statutory stipulations and lack of ideal formula. This Unit also discusses and illustrates three formula plans of portfolio revision, namely, constant-dollar-value plan, constant-ratio plan, and variable-ratio plan. Before closing the discussion about formula plans, it was also noted that these formula plans are not a royal road to riches. They have their own limitations. The choice of portfolio revision strategy or plan is thus no simple question. The choice will involve cost and benefit analysis.

15.12 SELF ASSESSMENT QUESTIONS:

1. In the Indian Context, buy-and-hold is a better strategy compare to any of the portfolio revision strategies,' Comment.
2. Compare and contrast constant-dollar-value plan, constant-ratio plan and variable-ratio plan. You may use imaginary data.

3. Formula plans are hardly useful in the Indian Context.' Comment.
4. Define the following:
 - a. Aggressive portfolio
 - b. Conservative portfolio
 - c. Action points
5. Formula plans are good because they aid the investor in overcoming his emotional involvement with the timing of the purchase and sale of stock.' Comment.
6. Critically evaluate the three formula plans and suggest modification, if any, to make them useful for investors in Indian Stock market.
7. Formula plans aid the investor in selecting appropriate securities. Comment.
8. What are the ground rules to be followed by an investor who wants to adopt formula plans?
9. Critically examine the basic assumptions of formula plans and comment on their validity in the Indian Context.
10. Why does the need arise for portfolio revision? What are the constraints in portfolio revision?

15.13 SUGGESTED READINGS

Fischer, Bonald E, and Ronald J. Jordon, 1995, *Security Analysis and Portfolio Management*, 6th PHI, New Delhi.

Frederick Amling, *Investments: An Introduction to Analysis and Management*, 5th Ed., Prentice Hall, N.J.



॥ सरस्वती नः सुभगा मयस्करत् ॥

Uttar Pradesh Rajarshi Tandon
Open University

M.Com-403

Security Analysis and Portfolio Management

BLOCK

5

UNIT-16

Life Insurance Corporation

UNIT-17

Unit Trust Of India

UNIT-18

Mutual Funds

UNIT-19

Foreign Capital as a Source of Finance

UNIT-20

External Commercial Borrowing and Foreign Currency Exchangeable
Bonds (FCCB)

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UNIT-16 LIFE INSURANCE CORPORATION

UNIT STRUCTURE

- 16.0 Objectives
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- 16.2 History Of LIC
- 16.3 Significance and Importance Of LIC
- 16.4 Features Of LIC
- 16.5 Advantages Of LIC
- 16.6 Disadvantages Of LIC
- 16.7 Milestones In The Life Insurance Business In India
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16.0 OBJECTIVES

After reading this unit the learner have knowledge about

- Significance and Importance Of LIC
- Features Of LIC
- Advantages Of LIC
- Disadvantages Of LIC

16.1 INTRODUCTION

The story of insurance is probably as old as the story of mankind. The same instinct that prompts modern businessmen today to secure themselves against loss and disaster existed in primitive men also. They too sought to avert the evil consequences of fire and flood and loss of life and were willing to make some sort of sacrifice in order to achieve security. Though the concept of insurance is largely a development of the recent past, particularly after the industrial era – past few centuries – yet its beginnings date back almost 6000 years.

The history of insurance traces the development of the modern business of insurance against risks, especially regarding cargo, property, death, automobile accidents, and medical treatment.

The insurance industry helps to eliminate risks (as when fire-insurance providers demand the implementation of safe practices and the installation of hydrants), spreads risks from individuals to the larger community, and provides an important source of long-term finance for both the public and private sectors.

Insurance in some form dates back to prehistory. Initially, people sold goods in their own villages or gathering places. However, with the passage of time, they turned to nearby villages to sell. Two types of economies existed in human societies: natural or non-monetary economies (using barter and trade with no centralized nor standardized set of financial instruments) and monetary economies (with markets, currency, financial instruments and so on). Insurance in the former case entails agreements of mutual aid. If one family's house gets destroyed, the neighbors are committed to helping rebuild it. Public granaries embodied another early form of insurance to indemnify against famines.

16.2 HISTORY OF LIFE INSURANCE CORPORATION

LIC is one of the financial institutions to be established in India after independence. The full form of LIC is Life Insurance Corporation and it was established in 1956.

Life Insurance in its modern form came to India from England in the year 1818. Oriental Life Insurance Company started by Europeans in Calcutta was the first life insurance company on Indian Soil. All the insurance companies established during that period were brought up with the purpose of looking after the needs of European community and Indian natives were not being insured by these companies. However, later with the efforts of eminent people like Babu Muttylal Seal, the foreign life insurance companies started insuring Indian lives. But Indian lives were being treated as sub-standard lives and heavy extra premiums were being charged on them. Bombay Mutual Life Assurance Society heralded the birth of first Indian life insurance company in the year 1870, and covered Indian lives at normal rates. Starting as Indian enterprise with highly patriotic motives, insurance companies came into existence to carry the message of insurance and social security through insurance to various sectors of society.

Bharat Insurance Company (1896) was also one of such companies inspired by nationalism. The Swadeshi movement of 1905-1907 gave rise to more insurance companies. The United India in Madras, National Indian and National Insurance in Calcutta and the Co-operative Assurance at Lahore were established in 1906. In 1907, Hindustan Co-operative Insurance Company took its birth in one of the rooms of the Jorasanko, house of the great poet Rabindranath Tagore, in Calcutta. The Indian Mercantile, General Assurance and Swadeshi Life (later Bombay Life) were some of the companies established during the same period. Prior to 1912 India had no legislation to regulate insurance business. In the year 1912, the Life Insurance Companies Act, and the Provident Fund Act were passed. The Life Insurance Companies Act, 1912 made it necessary that the premium rate tables and periodical valuations of companies should be certified by an actuary. But the Act discriminated between foreign and Indian companies on many accounts, putting the Indian companies at a disadvantage.

The first two decades of the twentieth century saw lot of growth in insurance business. From 44 companies with total business-in-force as Rs.22.44 crore, it rose to 176 companies with total business-in-force as Rs.298 crores in 1938. During the mushrooming of insurance companies many financially unsound concerns were also floated which failed miserably. The Insurance Act 1938 was the first legislation governing not only life insurance but also non-life insurance to provide strict state control over insurance business. The demand for nationalization of life insurance industry was made repeatedly in the past but it gathered momentum in 1944 when a bill to amend the Life Insurance Act 1938 was introduced in the Legislative Assembly. However, it was much later on the 19th of January, 1956, that life insurance in India was nationalized. About 154 Indian insurance companies, 16 non-Indian companies and 75 provident were operating in India at the time of nationalization. Nationalization was accomplished in two stages; initially the management of the companies was taken over by means of an Ordinance, and later, the ownership too by means of a comprehensive bill. The Parliament of India passed the Life Insurance Corporation Act on the 19th of June 1956, and the Life Insurance Corporation of India was created on 1st September, 1956, with the objective of spreading life insurance much more widely and in particular to the rural areas with a view to reach all insurable persons in the country, providing them adequate financial cover at a reasonable cost.

LIC had 5 zonal offices, 33 divisional offices and 212 branch offices, apart from its corporate office in the year 1956. Since life insurance contracts are long term contracts and during the currency of the policy it requires a variety of services need was felt in the later years to expand the operations and place a branch office at each district headquarter. Re-organization of LIC took place and large numbers of new branch offices were opened. As a result of re-organisation servicing functions were transferred to the branches, and branches were made accounting units. It worked wonders with the performance of the corporation. It may be seen that from about 200.00 crores of New Business in 1957 the corporation crossed 1000.00 crores only in the year 1969-70, and it took another 10 years for LIC to cross 2000.00 crore mark of new business. But with re-organisation happening in the early eighties, by 1985-86 LIC had already crossed 7000.00 crore Sum Assured on new policies.

Today LIC functions with 2048 fully computerized branch offices, 113 divisional offices, 8 zonal offices, 1381 satellite offices and the Corporate office. LIC's Wide Area Network covers 113 divisional offices and connects all the branches through a Metro Area Network. LIC has tied up with some Banks and Service providers to offer on-line premium collection facility in selected cities. LIC's ECS and ATM premium payment facility is an addition to customer convenience. Apart from on-line Kiosks and IVRS, Info Centres have been commissioned at Mumbai, Ahmedabad, Bangalore, Chennai, Hyderabad, Kolkata, New Delhi, Pune and many other cities. With a vision of providing easy access to its policyholders, LIC has launched its SATELLITE SAMPARK offices. The satellite offices are smaller, leaner and closer to the customer. The digitalized records of the satellite offices will facilitate anywhere servicing and many other conveniences in the future.

LIC continues to be the dominant life insurer even in the liberalized scenario of Indian insurance and is moving fast on a new growth trajectory surpassing its own past records. LIC has issued over one crore policies during the current year. It has crossed the milestone of issuing 1,01,32,955 new policies by 15th Oct, 2005, posting a healthy growth rate of 16.67% over the corresponding period of the previous year.

From then to now, LIC has crossed many milestones and has set unprecedented performance records in various aspects of life insurance business. The same motives which inspired our forefathers to bring insurance into existence in this country inspire us at LIC to take this message of protection to light the lamps of security in as many homes as possible and to help the people in providing security to their families.

16.2.1 FOUNDING ORGANIZATIONS

The Oriental Life Insurance Company, the first company in India offering life insurance coverage, was established in Kolkata in 1818. Its primary target market was the Europeans based in India, and it charged Indians heftier premiums. Surendranath Tagore had founded Hindustan Insurance Society, which later became Life Insurance Corporation.

The Bombay Mutual Life Assurance Society, formed in 1870, was the first native insurance provider. Other insurance companies established in the pre-independence era included

- Postal Life Insurance (PLI) was introduced on 1 February 1884
- Bharat Insurance Company (1896)
- United India (1906)
- National Indian (1906)
- National Insurance (1906)

- Co-operative Assurance (1906)
- Hindustan Co-operatives (1907)
- Indian Mercantile
- General Assurance
- Swadeshi Life (later Bombay Life)
- Sahyadri Insurance (Merged into LIC, 1986)

The first 150 years were marked mostly by turbulent economic conditions. It witnessed India's First War of Independence, adverse effects of the World War I and World War II on the economy of India, and in between them the period of worldwide economic crises triggered by the Great depression. The first half of the 20th century saw a heightened struggle for India's independence. The aggregate effect of these events led to a high rate of and liquidation of life insurance companies in India. This had adversely affected the faith of the general in the utility of obtaining life cover.

16.3 SIGNIFICANCE AND IMPORTANCE OF LIC

The main aim behind the establishment was to spread the message of life insurance in the country. Also, it was required to mobilize people's savings. This was done particularly for various nation-building activities.

1. **Industry leader:** You are assured of being associated with a leader which has a technologically advanced network to provide you the most advanced and efficient services.
2. **An array of plans:** Innovative plans are designed to ensure the maximum benefit of the policyholder and their family. LIC provides a complete basket of plans from Endowment plans to Money Back plans cover to its customers.
3. **Easy claim procedure:** LIC provides a simplified claim procedure. This is the reason perhaps why it provided the highest percentage of Claim Settlement Ratio across the industry for the year 2015-16.
4. **Unmatchable customer support:** The customer support of LIC is one of the best in the industry. It provided 100% grievances settlement for the year 2015-16.
5. **Simplified process:** Simplified processes, especially the online customer services are configured to make life easier for the policyholders. You can get the complete detail of your policy sent on an SMS.
6. **Most trusted:** LIC is the most trusted insurance company with hundreds of recognitions and awards including the likes of Golden Peacock Award-2015, India's Most Trusted Brand-2015 and Brand Icon Award among many others.

16.4 FEATURES OF LIC

There are various features that stand out from their competitors. These areas below:

1. **As a Savings Institution-** Life insurance mobilizes as well as promotes the savings in the country. Furthermore, income tax concession provides more incentives to people with higher income. This is done when it is saved through various its schemes. In recent years, business for insurance has been on rising. This is because the country is becoming more insurance conscious.
2. **Institution for term Financing-** Another function of LIC can also be termed as a large term financing institution. Also, the net annual business through ingestible funds is very high. Furthermore, net income obtained through large investments is also very high for it.
3. **Investment Institution-** A large part of an investment by LIC is in government securities. Also, it stated in the law that it has to invest at least 50% of its accrual. This is done in the form of premium income in government as well as other approved securities. Also, it's funds are made available to the private sector. This is possible through investment in loans, shares, and debentures. Furthermore, it plays a significant role in developing the business of underwriting of new issues.
4. **Stabilizes the Share Market-** LIC plays the role of downward stabilizer for the share market. This is because of the inflows of the new funds. Thus, these new funds help LIC buy shares from the weak. Particularly when the market is weak. Also, LIC does not sell the shares when the market overshoots. This is done because of the pressure of investment in new funds. Also, it is partly due to disincentivizing the capital gains tax.

16.5 ADVANTAGES OF LIC

Life insurance offers several advantages not available from any other financial instrument; yet it also has disadvantages.

1. Life insurance provides an infusion of cash for dealing with the adverse financial consequences of the insured's death.
2. Life insurance enjoys favorable tax treatment unlike any other financial instrument.
 - Death benefits are generally income-tax-free to the beneficiary.
 - Death benefits may be estate-tax free if the policy is owned properly.
 - Cash values grow tax deferred during the insured's lifetime.
 - Cash value withdrawals are treated on a first-in-first-out (FIFO) basis, therefore cash value withdrawals up to the total premiums paid are generally income-tax free.
 - Policy loans are income tax free.
 - A life insurance policy may be exchanged for another life insurance policy (or for an annuity) without incurring current taxation.

3. Many life insurance policies are exceptionally flexible in terms of adjusting to the policyholder's needs. The death benefit may be decreased at any time and the premiums may be easily reduced, skipped or increased.
4. A cash value life insurance policy may be thought of as a tax-favored repository of easily accessible funds if the need arises; yet, the assets backing these funds are generally held in longer-term investments, thereby earning a higher return.

16.6 DISADVANTAGES OF LIC

1. Policyholders forego some current expenditure to pay policy premiums. Moreover, life insurance is typically purchased for the benefit of others and usually only indirectly for the insured person.
2. Cash surrender values are usually less than the premiums paid in the first several policy years and sometimes a policy owner may not recover the premiums paid if the policy is surrendered.
3. The life insurance purchase decision and the positioning of the life insurance can be complex especially if the insurance is for estate planning, business situations or complex family situations.
4. The life insurance acquisition process can be annoying and perplexing (e.g. Is the life insurance agent trustworthy? Is this the right product and carrier? How can medical underwriting be streamlined?).
5. Mostly, development banks provide assistance in the form of debt capital for term loans. Although the loan financing ensures stable returns there are some drawbacks. Because of loans, the government loses out on potential corporation tax.

Furthermore, the development of corporate bonds is limited due to financing. Also, the industry prefers loans to debentures. This is simply because the default on loans is not made public. Also, it can be negotiated with the lending agency.

6. The capital resources of any development bank are obtained from institutional sources. Because they cannot raise the funds from the public unlike insurance companies and banks. Also, institutional sources have enabled the development banks getting funds at a very low yield.

But this low yield is now not possible because of the popularity of the banks. Thus, they are not able to make their loans and debentures raise funds in the public.

16.7 MILESTONES IN THE LIFE INSURANCE BUSINESS IN INDIA

Some of the important milestones in the life insurance business in India are:

1818: Oriental Life Insurance Company, the first life insurance company on Indian soil started functioning.

1870: Bombay Mutual Life Assurance Society, the first Indian life insurance company started its business.

1912: The Indian Life Assurance Companies Act enacted as the first statute to regulate the life insurance business.

1928: The Indian Insurance Companies Act enacted to enable the government to collect statistical information about both life and non-life insurance businesses.

1938: Earlier legislation consolidated and amended to by the Insurance Act with the objective of protecting the interests of the insuring public.

1956: 245 Indian and foreign insurers and provident societies are taken over by the central government and nationalised. LIC formed by an Act of Parliament, viz. LIC Act, 1956, with a capital contribution of Rs. 5 crore from the Government of India.

The General insurance business in India, on the other hand, can trace its roots to the Triton Insurance Company Ltd., the first general insurance company established in the year 1850 in Calcutta by the British.

16.7.1 MILESTONES IN THE GENERAL INSURANCE BUSINESS IN INDIA

Some of the important milestones in the general insurance business in India are:

1907: The Indian Mercantile Insurance Ltd. set up, the first company to transact all classes of general insurance business.

1957: General Insurance Council, a wing of the Insurance Association of India, frames a code of conduct for ensuring fair conduct and sound business practices.

1968: The Insurance Act amended to regulate investments and set minimum solvency margins and the Tariff Advisory Committee set up.

1972: The General Insurance Business (Nationalisation) Act, 1972 nationalised the general insurance business in India with effect from 1st January 1973.

107 insurers amalgamated and grouped into four companies viz. the National Insurance Company Ltd., the New India Assurance Company Ltd., the Oriental Insurance Company Ltd. and the United India Insurance Company Ltd. GIC incorporated as a company.

16.8 NATIONALIZATION OF LIC

In 1955, parliamentarian Feroze Gandhi raised the matter of insurance fraud by owners of private insurance agencies. In the ensuing investigations, one of India's wealthiest businessmen, Ramkrishna Dalmia, owner of the Times of India newspaper, was sent to prison for two years.

The Parliament of India passed the Life Insurance of India Act on 19 June 1956 creating the Life Insurance Corporation of India, which started operating in September of that year. It consolidated the business of 245 private life insurers

and other entities offering life insurance services; this consisted of 154 life insurance companies, 16 foreign companies and 75 provident companies. The nationalization of the life insurance business in India was a result of the Industrial Policy Resolution of 1956, which had created a policy framework for extending state control over at least 17 sectors of the economy, including life insurance.

16.9 STRUCTURE OF LIC

The LIC's executive board consists of Chairman and Managing Directors. The Central Office of LIC is based out of Mumbai which sits The Chairman, all four Managing Directors, and all Executive Directors (Department Heads). LIC has a total of 8 Zonal Offices namely Delhi, Mumbai, Hyderabad, Chennai, Kanpur, Kolkata, Bhopal & Patna.

LIC's Contribution to the five year plans over the years

Plan	Year	Investment
2	1956-1961	₹184 Cr
3	1961-1966	₹285 Cr
4	1969-1974	₹1,530 Cr
5	1974-1979	₹2,942 Cr
6	1980-1985	₹7,140 Cr
7	1985-1990	₹12,969 Cr
8	1992-1997	₹56,097 Cr
9	1997-2002	₹1,70,929 Cr
10	2002-2007	₹3,94,779 Cr
11	2007-2012	₹7,04,720 Cr
12	2012-2017	₹14,23,055 Cr
13	2017-2022	₹28,01,483 Cr

16.9.1 GROWTH AS A MONOPOLY

From its creation, the Life Insurance Corporation of India, which commanded a monopoly of soliciting and selling life insurance in India, created huge surpluses and by 2006 was contributing around 7% of India's GDP.

The corporation, which started its business with around 300 offices, 5.7 million policies and a corpus of ₹45.9 crores (US\$92 million as per the 1959 exchange rate of roughly ₹5 for US\$1), had grown to 25,000 servicing around 350 million policies and a corpus of over ₹800,000 crore (US\$110 billion) by the end of the 20th century.

16.9.2 LIBERALIZATION POST 2000S

In August 2000, the Indian Government embarked on a program to liberalize the insurance sector and opened it up for the private sector. LIC emerged as a beneficiary from this process with robust performance, albeit on a base substantially higher than the private sector.

In 2013, the first year premium compound annual growth rate (CAGR) was 24.53% while total life premium CAGR was 19.28% matching the growth of the life insurance industry and outperforming general economic growth.

16.10 OPERATIONS OF LIC

Today LIC functions with 2048 fully computerized branch offices, 8 zonal offices, around 113 divisional offices, 2,048 branches and 1408 satellite offices and the Central Office: it also has 73 customer zones and 25 metro-area service hubs located in different cities and towns of India. It also has a network of 1,537,064 individual agents, 342 Corporate Agents, 109 Referral Agents, 114 Brokers and 42 Banks for soliciting life insurance business from the public.

The LIC has 22 departments each headed by an Executive Director namely Marketing, Bankassurance (B&AC), Corporate Communication, Personnel, CRM, Direct Marketing, E&OS, F&A, IT/BPR, Inspection, Investment, SBU/Estates, Investment Operations, P&GS, Actuarial, Chairman Sectt, F&A, Micro Insurance, RTI, HRD, Engineering, and Vigilance.

The LIC has 8 Zonal Offices headed by a Zonal Manager(I/C) (Executive Director Cadre) who is one of the key decision-makers of the corporation after the Board

North Zone	New Delhi
Central Zone	Bhopal
East Zone	Kolkata

West Zone	Mumbai
South Zone	Chennai
East Central Zone	Patna
North Central Zone	Kanpur
South Central Zone	Hyderabad

The LIC follows a horizontal line of command & vertical line of command, while each department is headed by an Executive Director, the Zonal offices are headed by a Zonal Manager who oversees all the departments & divisions of the Zone - Making him De-facto CEO of the Zone. The zonal departmental heads are Regional Managers. Divisions are headed by Sr. Divisional Manager(I/C) who oversees all the departments & branches of the division. There are 3 layers of Horizontal Management namely Senior Divisional Manager(I/C), Zonal Manager(I/C) & the Chairman/MD. There are also 3 layers of vertical management namely Managers of Divisions, Regional Managers of Zonal Office & the Executive Directors of Central office. Horizontal Management is considered key managers of the corporation.

The Cadre list & Possible designations of Class 1 officers (Increasing order)

Cadre/Rank Name	Posting Designations
Chairman	Chairman
Managing Director	Managing Director
Zonal Manager(Special)	Zonal Manager(I/C), Executive Director, CEO of Subsidiary
Zonal Manager(Ordinary)(3 Year Cadre)	Regional Manager, Chief, Director, CEO of Subsidiary
Sr Divisional Manager	Deputy Zonal Manager, SDM(I/C), Principal, Faculty Member, Regional Manager, Secretary

Divisional Manager	Chief Manager, DM, Secretary, Dy Secretary, Marketing Manager, Principal, Faculty Member
Assistant Divisional Manager	Sr. Branch Manager (I/C), Sr. Branch Manager(Sales), Manager(Admin), Manager, Dy Secretary, Faculty Member
Administrative Officer	Branch Manager(I/C), BM(SALES), AO
Assistant Administrative Officer	ABM(Sales), AAO, PA, Deputy Manager,

Now LIC also has the 1899 branches of IDBI bank at its disposal thus it can carry out its insurance business through these branches of the bank.

16.11 TYPES OF LIC LIFE INSURANCE PLANS

LIC envisages your individual insurance needs and renders plans that suit you best. The dual advantage of protection and savings, integrated with financial assistance keep you insured lifelong. Various Life Insurance Plans offered by LIC are:

1. **LIC's Jeevan Pragati-** A non-linked plan constituted in such a way that after every five years of the policy, the risk cover will automatically increase. It is best suitable for retirement collection with the cover against accident. An endowment plan with profits makes it a combination of savings and financial protection.
 - **Entry Age-** This policy is available for individuals from 12 years to 45 years.
 - **Term Period-** The term period is from 12 years to 20 years.
 - **Death Benefits-** In the case of the death of the policyholder, the nominee gets the sum assured with the bonus, and is either ten times the total annual premium or is calculated as per the terms of the policy.
 - **Maturity Benefits-** The sum assured is paid with the bonus and the reversionary bonus for the full term of the policy. Minimum sum assured is Rs.1, 50,000/-. Maximum age at maturity is 65years. Maturity amount is tax-free under section 10 (10D).
 - **Tax Benefit -** The amount of premium paid is exempted under section 80C.
 - **Loan Facility-** It is available after you have paid a premium for three years.

2. **LIC's Jeevan Labh-** This policy is limited premium paying and is not linked to share markets. It is an endowment plan with profits and hence the holder gets the sum assured with bonus and other benefits.
- **Premium-** Premium paying period is lesser than the policy term.
 - **Entry Age** – The age of the policyholder should be between 8 years and 59 years.
 - **Term Period-** The Policy has a term period of 16 years to 25 years.
 - **Grace Period-** There is a grace period of 30days for paying yearly, half yearly and quarterly premium, and a grace period of 15days in case of monthly premium.
 - **Loan Facility-** Once you have paid the premium for three years, you can avail the loan.
 - **Tax Benefits-** The amount of premium paid is exempted under section 80C and the maturity amount is tax-free.
3. **LIC's Single Premium Endowment Plan-** This plan asks the policyholder to pay the lump sum of the premium as a single payment at the start of the plan. This is an endowment plan with bonus, in addition to other benefits.
- **Entry Age-** The plan is available for individuals between the age of 90days and 65years.
 - **Sum Assured-** The sum assured is paid in both the cases – once the policy tenure is complete and in the case of sudden demise of the policyholder. The sum assured is paid with a bonus in both the cases.
 - **Loan Facility-** Loan facility is available after the first year of the policy.
 - **Guaranteed Surrender Value-** The holder gets 70% of the single premium paid if the policy is surrendered within 12months of the commencement of the policy; and receives 90% of the premium paid from the second year onwards.
 - **Tax Benefits-** The premium paid is exempted under the section 80C and the maturity amount is tax-free under the section 10(10D).
 - **Term Period–** The policy has a term period of 10years to 25 years.
 - **Maturity Age -** The age of the insured should be between 18 years and 75years.
4. **LIC's New JeevanAnand-** The plan is a combination of whole life plan and an endowment plan. The plan continues to provide coverage in case of the sudden death of the insured and even after the maturity of the plan.
- **Maturity-** A traditional endowment plan with the added feature that even after the maturity, the plan continues to be in force.

- **Tax Benefits-** Premium paid and the maturity amount is exempted under section 80C and 10(10D).
- **Entry Age-** It is available for individuals between the age of 18 years and 50years.
- **Grace Period-** A grace period of 30days is applicable.

Rider Available: LIC's Accidental death and disability benefit rider are applicable.

5. **LIC's Jeevan Lakshya-** This is a conventional endowment plan with profits. The policy is useful for minors and offers a lump-sum amount irrespective of the survival of the insured at the time of policy maturity
 - **Sum Assured-** Minimum sum assured is Rs.1,00,000/-.
 - **Entry Age –** The insured should be between 18 years and 50years of age and the maturity age is 65years.
 - **Premium Tenure-** Irrespective of the tenure of the policy, the premium tenure is 3 years.
 - **Maturity Benefits-** Sum Assured plus Bonus and the Final Additional Bonus (FAB).
 - **Death Benefits-** Sum assured (110% of the premium paid) plus bonus and FAB.

Riders Available:

- LIC's Accidental death and disability benefit rider
 - LIC New Term Insurance Rider
6. **LIC's Bima Diamond-** It is a perfect plan for individuals who are looking for a short-term investment with periodic guaranteed return and added benefits.
 - **Extended Protection Period-** Your protection is extended, even after the completion of the policy tenure, to half of the policy tenure.
 - **Money Back-** After every 4th year of the policy, you get an assured amount as money back.
 - **Addition Cover Period-** In the case of non-payment of the premium for full five policy years, an Auto Cover Period of two years is offered.
 - **Maturity Benefits-** The sum assured and the loyal additions are paid at maturity.
 - **Maturity is calculated as –** 55% of the basic sum assured for 16 years and 45% of the basic sum assured for 20 and 24 years.

Riders Available:

- LIC's Accidental death and disability benefit rider

- LIC New Term Insurance Rider.
7. **LIC's New Money Back Plan -20 Years-** This plan is a money-back traditional endowment plan. It is a non-linked plan. The survival benefits are disbursed after the completion of every fifth year of the policy.
- **Policy Term**– The policy is valid for 20 years
 - **Minimum Sum Assured** – Minimum sum assured is Rs.100,000/-
 - **Survival Benefits-** 20% of the sum assured is paid on the 5th, 10th, and 15th year of the policy.
 - **Death Benefits-** The nominee receives the sum payout plus the bonus and the FAB. It is ten times the total sum of the annual premium or 125% of the basic sum assured.
 - **Maturity Benefits-** The balance 40% of the sum is paid with Bonus plus FAB to the policyholder.
8. **LIC's New BimaBachat-** It is a traditional single premium endowment plan. However, the survival benefits are paid just like in a money back plan.
- **Survival Benefits-** After every three years, if the insured is alive, 15% of the basic sum assured is paid as survival benefit.
 - **Maturity Benefits-** The complete single premium along with Loyalty Addition is paid.
 - **Death Benefits-** In the case of death of the policy tenure the complete, sum assured along with the Loyalty addition are paid to the nominee.
9. **LIC's New Children's Money Back plan-** A traditional money back policy specially designed for the benefit of children, even in the case of the absence of parents. The child's life is also covered.
- **Life Cover of Child-** If the age of the life assured is less than 8 years, the risk cover starts one day before the commencement date of two years.
 - **Survival Benefits-** The survival benefits are disbursed once the life assured has attained the age of 18years and is paid @20% of the sum assured. It is paid every policy anniversary year.
 - **Death Benefits-** If the life assured dies before the commencement of the risk, the paid premiums are returned. The benefits of sum assured plus bonus and FAB is paid in case the death is after the commencement of risk.
 - **Tax Benefits-** The premium paid and the sum assured are exempted under the section 80C and 10(10D).
 - **Entry Age-** 0 years to 12 years.
 - **Policy Term-** 25years.

10. **LIC's Jeevan Tarun-** This is a participating endowment plan for children up to the age of twelve years. There are four options to receive the maturity and survival benefits. It is best suited for a child's education.
- **Premium Period-** 20 years but the policy continues till 25 years.
 - **Risk Cover-** Either at the age of 8 years or two years after the commencement of the policy.
 - **Survival Benefits-** The last five years, when the policyholder is not paying the premium, he has the option of receiving the survival benefits in four different forms- 0%, 5%, 10% and 15% of the sum assured.
 - **Maturity Benefits-** The balance sum assured and the bonus are paid as the maturity benefits after the completion of tenure of the policy.
 - **Death Benefits-** In the case of the death of policyholder, the nominee gets the sum assured at the time of death and the acquired bonus. This is irrespective of the amount paid as the "survival benefit".
 - **Tax Benefits-** The premium paid and sum assured are exempted under section of 80C and 10(10D).

Riders Available:

- LIC's Premium Waiver Benefit Rider is offered.
11. **LIC's Amulya Jeevan 2-** This is purely a term plan whereby in case the insured dies within the policy tenure, the nominee gets the sum assured or the death benefits.
- **Sum Assured -** Minimum Sum Assured is Rs.25Lacs. However, it can be as high as 1 crore.
 - **Tenure -** The tenure can be as long as 35 years.
 - **Tax Benefits -** The Premium paid and the sum assured are exempted under the section 80C and 10(10D).
 - **Entry Age -** Entry Age is 18 years to 60 years.
 - **Grace Period -** Grace Period of 30 days is available to pay the premium.
12. **LIC Bhagya Lakshmi Plan-** This micro insurance policy is specially designed for lower- income groups and has features of investment, savings, and insurance. Unlike any term plan, it also offers Maturity Benefits to the surviving policyholder.
- **Death Benefit-** In case of sudden death of the policyholder within the policy tenure, the nominee gets the assured sum.
 - **Maturity Benefits-** A total of 110% of the premium paid is paid to the live policyholder at the time of maturity.

- **Surrender Value-** Depending on the premium paying term of below or above ten years, the surrender value is calculated. If surrendered after paying a premium for ten years or more, the surrender value is calculated @ after three full year's premium. If the surrendered within ten years, then the SA is calculated @ after two full year's premium.

13. Aam Aadmi Beema Yojana- Ministry of Finance, Government of India has approved the merger of Social Security Schemes viz., Aam Admi Bima Yojana (AABY) and Janashree Bima Yojana (JBY).

The merged scheme is renamed "Aam Admi Beema Yojana" and has come into effect from 01.01.2013.

A) Details Of The Scheme-

1. Eligibility Criteria-

1. The members should be aged between 18 years completed and 59 years nearer birthday.
2. The member should normally be the head of the family or one earning member of the below poverty line family (BPL) or marginally above the poverty line under identified vocational group/rural landless household.

2. Nodal Agency- "Nodal Agency" shall mean the Central Ministerial Department/State Government / Union Territory of India/any other institutionalized arrangement/any registered NGO appointed to administer the Scheme as per the rules. In the case of "Rural Landless Households", the nodal agency will mean the State Government/Union Territory appointed to administer the Scheme.

3. Age Proof-

- a) Ration Card
- b) Extract from Birth Register
- c) Extract from School Certificate
- d) Voter's List
- e) Identity card issued by reputed employer/Government Department
- f) Unique Identification Card (Aadhar Card)

4. Premium- The premium to be charged initially under the scheme will be Rs.200/- per annum per member for a cover of Rs.30,000/-, out of which 50% will be subsidized from the Social Security Fund . In case of Rural Landless Household (RLH) remaining 50 % premium shall be borne by the State Government/ Union Territory and in case of other occupational group the remaining 50% premium shall be borne by the Nodal Agency and/or Member and/or State Government/ Union Territory

These schemes can further be classified into various plans.

16.11.1 ENDOWMENT PLANS

Below given LIC plans come under Endowment Plans:

1. LIC Jeevan Pragati Plan- LIC's Jeevan Pragati Plan is a non-linked, with - profits plan which offers a combination of protection and savings. This plan provides for automatic increase in risk cover after every five years during the term of the policy. In addition, this plan also takes care of liquidity needs through loan facility.

1. Benefits-

Death benefit : In case of death during the policy term, provided all due premiums have been paid, Death benefit, defined as sum of "Sum Assured on Death ", vested Simple Reversionary Bonuses and Final Additional bonus, if any, shall be payable. Where "Sum Assured on Death" is defined as the higher of 10 times of annualised premium or Absolute amount assured to be paid on death i.e. 100% of the Basic Sum Assured during first 5 policy years, 125% of the Basic Sum Assured during 6th to 10th policy years, 150% of the Basic Sum Assured during 11th to 15 th policy years and thereafter 200% of the Basic Sum Assured. This death benefit shall not be less than 105% of all the premiums paid as on date of death.

Premiums referred above shall not include any taxes, extra amount chargeable under the policy due to underwriting decision and rider premium, if any.

Maturity Benefit: "Sum Assured on Maturity" equal to Basic Sum Assured, along with vested Simple Reversionary bonuses and Final Additional bonus, if any, shall be payable in lump sum on survival to the end of the policy term provided all due premiums have been paid.

2. LIC's Jeevan Labh- LIC's Jeevan Labh is a limited premium paying, non-linked, with-profits endowment plan which offers a combination of protection and savings. This plan provides financial support for the family in case of unfortunate death of the policyholder any time before maturity and a lump sum amount at the time of maturity for the surviving policyholder. This plan also takes care of liquidity needs through its loan facility.

1. Benefits-

Death Benefit : In case of death during the policy term, provided all due premiums have been paid, Death benefit, defined as sum of "Sum Assured on Death",vested Simple Reversionary Bonuses and Final Additional bonus, if any, shall be payable. Where, "Sum Assured on Death" is defined as the higher of 10 times of annualised premium or Absolute amount assured to be paid on death i.e. Basic Sum Assured . This death benefit shall not be less than 105% of all the premiums paid as on date of death.

Premiums referred above shall not include any taxes, extra amount chargeable under the policy due to underwriting decision and rider premium(s), if

any.

Maturity Benefit: "Sum Assured on Maturity" equal to Basic Sum Assured, along with vested Simple Reversionary bonuses and Final Additional bonus, if any, shall be payable in lump sum on survival to the end of the policy term provided all due premiums have been paid.

Participation in Profits: The policy shall participate in profits of the Corporation and shall be entitled to receive Simple Reversionary Bonuses declared as per the experience of the Corporation, provided the policy is in full force. Final (Additional) Bonus may also be declared under the policy in the year when the policy results into a claim either by death or maturity.

2. Optional Benefit- The policyholder has an option of availing the following Rider benefit(s):

- LIC's Accidental Death and Disability Benefit Rider.
- LIC's New Term Assurance Rider.

3. LIC's Single Premium Endowment Plan- LIC's Single Premium Endowment Plan is a participating non-linked savings cum protection plan, where premium is paid in lump sum at the outset of the policy. This combination provides financial protection against death during the policy term with the provision of payment of lumpsum at the end of the selected policy term in case of his/her survival. This plan also takes care of liquidity needs through its loan facility.

4. LIC's New Endowment Plan- LIC's New Endowment Plan is a participating non-linked plan which offers an attractive combination of protection and saving features. This combination provides financial support for the family of the deceased policyholder any time before maturity and good lump sum amount at the time of maturity for the surviving policyholders. This plan also takes care of liquidity needs through its loan facility.

1. Benefits-

Death benefit: In case of death during the policy term provided all due premiums have been paid Death benefit, defined as sum of "**Sum Assured on Death**" and vested Simple Reversionary Bonuses and Final Additional bonus, if any, shall be payable. Where, "**Sum Assured on Death**" is defined as higher of Basic Sum Assured or 10 times of annualised premium. This death benefit shall not be less than 105% of all the premiums paid as on date of death. Where premiums exclude service tax, extra premium and rider premiums, if any.

Maturity Benefit: Basic Sum Assured, along with vested simple reversionary bonuses and Final Additional bonus, if any, shall be payable in lump sum on Survival to the end of the policy term provided all due premiums have been paid.

Participation in Profits: The policy shall participate in profits of the Corporation and shall be entitled to receive Simple Reversionary Bonuses declared as per the experience of the Corporation, provided the policy is in full force.

Final (Additional) Bonus may also be declared under the policy in the year when the policy results into a claim either by death or maturity, provided the policy has run for certain minimum term.

2. Optional Benefit:

LIC's Accidental Death and Disability Benefit Rider: LICs Accidental Death and Disability Benefit Rider is available as an optional rider by payment of additional premium. In case of accidental death, the Accident Benefit Sum Assured will be payable as lumpsum along with the death benefit under the basic plan. In case of accidental permanent disability arising due to accident (within 180 days from the date of accident), an amount equal to the Accident Benefit Sum Assured will be paid in equal monthly installments spread over 10 years and future premiums for Accident Benefit Sum Assured as well as premiums for the portion of Basic Sum Assured which is equal to Accident Benefit Sum Assured under the policy, shall be waived.

4. LIC's New Jeevan Anand Plan- LIC's New Jeevan Anand Plan is a participating non-linked plan which offers an attractive combination of protection and savings. This combination provides financial protection against death throughout the lifetime of the policyholder with the provision of payment of lumpsum at the end of the selected policy term in case of his/her survival. This plan also takes care of liquidity needs through its loan facility.

1. Benefits:

Death benefit : Provided all due premiums have been paid, the following death benefit shall be paid:

On Death during the policy term: Death benefit, defined as sum of **Sum Assured on Death** and vested Simple Reversionary Bonuses and Final Additional bonus, if any, shall be payable. Where, **Sum Assured on Death** is defined as higher of 125% of Basic Sum Assured or 10 times of annualised premium. This death benefit shall not be less than 105% of all the premiums paid as on date of death.

The premiums mentioned above exclude service tax, extra premium and rider premiums, if any.

On death of policyholder at any time after policy term: Basic Sum Assured

Benefits payable at the end of Policy Term: Basic Sum Assured, along with vested Simple Reversionary Bonuses and Final Additional Bonus, if any, shall be payable in lump sum on survival to the end of the policy term provided all due premiums have been paid.

Participation in Profits : The policy shall participate in profits of the Corporation and shall be entitled to receive Simple Reversionary Bonuses declared as per the experience of the Corporation during policy term provided the policy is in full force.

Final (Additional) Bonus may also be declared under the plan in the year when the policy results into death claim during the policy term or due for the

survival benefit payment provided the policy is in full force and has run for certain minimum term.

2. Optional Benefit:

LIC's Accidental Death and Disability Benefit Rider: LIC's Accidental Death and Disability Benefit Rider is available as an optional rider by payment of additional premium during the policy term. In case of accidental death during the policy term, Accident Benefit Sum Assured will be payable as lumpsum along with the death benefit under the basic plan. In case of accidental permanent disability arising due to accident (within 180 days from the date of accident), an amount equal to the Accident Benefit Sum Assured will be paid in equal monthly installments spread over 10 years and future premiums for Accident Benefit Sum Assured as well as premiums for the portion of Basic Sum Assured which is equal to Accident Benefit Sum Assured under the policy, shall be waived.

5. LIC's Limited Premium Endowment Plan- LIC's Limited Premium Endowment Plan is a participating non-linked plan which offers a combination of protection and savings. This plan provides financial support for the family in case of unfortunate death of the policyholder any time before maturity and a lump sum amount at the time of maturity for the surviving policyholder. This plan also takes care of liquidity needs through its loan facility.

1. Benefits:

Death benefit: In case of death during the policy term, provided all due premiums have been paid, Death benefit, defined as sum of "Sum Assured on Death", vested Simple Reversionary Bonuses and Final Additional bonus, if any, shall be payable. Where, "Sum Assured on Death" is defined as the highest of 10 times of annualised premium or Guaranteed Sum Assured on Maturity i.e. Basic Sum Assured or Absolute amount assured to be paid on death i.e. 125% of Basic Sum Assured . This death benefit shall not be less than 105% of all the premiums paid as on date of death.

Premiums referred above exclude service tax, extra premium and rider premium(s), if any.

Maturity Benefit: "Sum Assured on Maturity" equal to Basic Sum Assured, along with vested Simple Reversionary bonuses and Final Additional bonus, if any, shall be payable in lump sum on survival to the end of the policy term provided all due premiums have been paid.

Participation in Profits: The policy shall participate in profits of the Corporation and shall be entitled to receive Simple Reversionary Bonuses declared as per the experience of the Corporation, provided the policy is in full force.

Final (Additional) Bonus may also be declared under the policy in the year when the policy results into a claim either by death or maturity.

2. Optional Benefit:

The policyholder has an option of availing the following Rider benefit(s):

LIC's Accidental Death and Disability Benefit Rider.

LIC's New Term Assurance Rider.

6. LIC's Jeevan Lakshya: LIC's Jeevan Lakshya is a participating non-linked plan which offers a combination of protection and savings. This plan provides for Annual Income benefit that may help to fulfill the needs of the family, primarily for the benefit of children, in case of unfortunate death of Policyholder any time before maturity and a lump sum amount at the time of maturity irrespective of survival of the Policyholder. This plan also takes care of liquidity needs through its loan facility.

1. Benefits-

Death Benefit: On death of the Life Assured before the stipulated Date of Maturity provided the policy is in full force by paying upto-date premiums, Death Benefit, defined as sum of "Sum Assured on Death", vested Simple Reversionary Bonuses and Final Additional Bonus, if any, shall be payable. Where "Sum Assured on Death" is defined as the sum of:

Annual Income Benefit equal to 10% of the Basic Sum Assured, which shall be payable from the policy anniversary coinciding with or following the date of death of Life Assured, till the policy anniversary prior to the date of maturity.

Assured Absolute Amount equal to 110% of Basic Sum Assured, which shall be payable on due date of maturity; and

The vested Simple Reversionary Bonuses and Final Additional Bonus, if any, included in the Death Benefit, shall be payable on due date of maturity.

The Death Benefit defined above shall not be less than 105% of all the premiums paid as on date of death.

Premiums referred above exclude tax, extra premium and rider premium(s), if any.

Maturity Benefit: "Sum Assured on Maturity" equal to Basic Sum Assured, along with vested Simple Reversionary bonuses and Final Additional bonus, if any, shall be payable in lump sum on survival to the end of the policy term provided all due premiums have been paid.

Participation in Profits: The policy shall participate in profits of the Corporation and shall be entitled to receive Simple Reversionary Bonuses declared as per the experience of the Corporation, provided the policy is in full force.

In case of death under a policy which is in full force, the policy shall continue to participate in profits up to the date of maturity and the entire vested Simple Reversionary Bonuses and Final Additional Bonus, if any, shall be payable on due date of maturity. Hence, the Simple Reversionary Bonus and Final Additional Bonus, if any, shall be payable under the policy on due date of maturity irrespective of survival of the Life Assured.

In case the premiums are not duly paid (except in case of death of the Life Assured under in force policy), the policy shall cease to participate in future

profits irrespective of whether or not the policy has acquired paid up value. However, the policy shall be considered as in force on death during the grace period.

Final Additional Bonus shall not be payable under reduced paid-up policies.

2. Optional Benefits:

The policyholder has an option of availing the following Rider benefit(s):

LIC's Accidental Death and Disability Benefit Rider.

LIC's New Term Assurance Rider.

Rider Sum Assured cannot exceed the Basic Sum Assured.

Annual Income Benefit equal to 10% of the Basic Sum Assured, which shall be payable from the policy anniversary coinciding with or following the date of death of Life Assured, till the policy anniversary prior to the date of maturity.

Assured Absolute Amount equal to 110% of Basic Sum Assured, which shall be payable on due date of maturity


- 7. LIC's Aadhaar Shila-** LIC's Aadhaar Shila Plan offers a combination of protection and savings. This plan is exclusively designed for female lives having Aadhaar Card issued by UIDAI (Unique Identification Authority of India). This plan provides financial support for the family in case of unfortunate death of the policyholder any time before maturity and a lump sum amount at the time of maturity for the surviving policyholder.
- 8. LIC's Aadhaar Stambh-** LIC's Aadhaar Stambh Plan offers a combination of protection and savings. This plan is exclusively designed for male lives having Aadhaar Card issued by UIDAI (Unique Identification Authority of India). This plan provides financial support for the family in case of unfortunate death of the policyholder any time before maturity and a lump sum amount at the time of maturity for the surviving policyholder.

16.11.2 WHOLE LIFE PLANS

LICs Jeevan Umang- LIC's Jeevan Umang plan offers a combination of income and protection to your family. This plan provides for annual survival benefits from the end of the premium paying term till maturity and a lump sum payment at the time of maturity or on death of the policyholder during the policy term.

16.11.3 MONEY BACK PLANS

- 1. LIC's Bima Shree-** LIC's Bima Shree plan offers a combination of protection and savings. This plan is specially designed for High Net-worth Individuals. This plan provides financial support for the family in case of unfortunate death of the policyholders during the policy term. Periodic payments shall also be made on survival of the policyholder at specified durations during the policy term and a lump sum payment to the surviving policyholder at the time of maturity

Policy Document 

2. **LIC's Jeevan Shiromani-** LIC's Jeevan Shiromani plan offers a combination of protection and savings. This plan is specially designed for High Net-worth Individuals. This plan provides financial support for the family in case of unfortunate death of the policyholders during the policy term. Periodic payments shall also be made on survival of the policyholder at specified durations during the policy term and a lump sum payment to the surviving policyholder at the time of maturity. In addition, this plan also provides for payment of a lumpsum amount equal to 10% of the chosen Basic Sum Assured on diagnosis of any of the specified Critical Illnesses.
3. **LIC's NEW MONEY BACK PLAN - 20 YEARS-** LIC's New Money Back Plan-20 years is a participating non-linked plan which offers an attractive combination of protection against death throughout the term of the plan along with the periodic payment on survival at specified durations during the term. This unique combination provides financial support for the family of the deceased policyholder any time before maturity and lump sum amount at the time of maturity for the surviving policyholders. This plan also takes care of liquidity needs through its loan facility.
4. **LIC's NEW MONEY BACK PLAN - 25 YEARS-** LIC's New Money Back Plan-25 years is a participating non-linked plan which offers an attractive combination of protection against death throughout the term of the plan along with the periodic payment on survival at specified durations during the term. This unique combination provides financial support for the family of the deceased policyholder any time before maturity and lump sum amount at the time of maturity for the surviving policyholders. This plan also takes care of liquidity needs through its loan facility.
5. **LIC's NEW BIMA BACHAT-** LIC's New Bima Bachat is a participating non-linked savings cum protection plan, where premium is paid in lump sum at the outset of the policy. It is a money-back plan which provides financial protection against death during the policy term with the provision of payment of survival benefits at specified durations during the policy term. In addition, on maturity, the single premium shall be returned along with Loyalty Addition, if any. This plan also takes care of liquidity needs through its loan facility.
6. **LIC's NEW CHILDREN'S MONEY BACK PLAN-** LIC's New Children's Money Back Plan is a participating non-linked money back plan. This plan is specially designed to meet the educational, marriage and other needs of growing children through Survival Benefits. In addition, it provides for the risk cover on the life of child during the policy term and for number of survival benefits on surviving to the end of the specified durations.
7. **LIC's Jeevan Tarun-** LIC's JEEVAN TARUN is a participating non-linked limited premium payment plan which offers an attractive combination of protection and saving features for children. This plan is specially designed to meet the educational and other needs of growing children through annual Survival Benefit payments from ages 20 to 24 years and Maturity Benefit at the age of 25 years. It is a flexible plan wherein at proposal stage the proposer

can choose the proportion of Survival Benefits to be availed during the term of the policy

16.11.4 TERM ASSURANCE PLANS

1. **LIC's Tech Term-** LIC's Tech-Term is a Non-Linked, Without Profit, Pure Protection "Online Term Assurance Policy" which provides financial protection to the insured's family in case of his/her unfortunate demise. This plan will be available through online application process only and no intermediaries will be involved.
2. **LIC's Jeevan Amar-** LIC's Jeevan Amar plan is a Non-Linked, Without Profit, pure protection plan. The plan offers the flexibility to choose from two death benefit options viz: Level Sum Assured and increasing Sum Assured. Under this plan, there are two categories of premium rates viz (1) Non-Smoker rates and (2) Smoker rates. Also lower premium rates will be available for female proposers.

The policyholder has the option to choose from Single, Regular and Limited Premium payment option. The plan also offers the flexibility to choose death benefit payment either as a lump sum payment and/or in installments. LIC's Jeevan Amar, being a pure protection plan, offers life cover to the policyholder at a very affordable price and ensures financial support for the family in case of unfortunate death of the policyholder during the policy term.

3. **LIC's Anmol Jeevan II-** LIC's Anmol Jeevan - II is a protection plan which provides financial protection to the insured's family in case of his/her unfortunate demise.

Benefits-

Death Benefit: In case of unfortunate death of the Life Assured during the policy term Sum Assured shall be payable.

Maturity Benefit: On survival to the end of the policy term, nothing shall be payable.

16.11.5 SPECIAL PLANS

LIC's Special Plans are not plans but opportunities that knock on your door once in a lifetime. These plans are a perfect blend of insurance, investment and a lifetime of happiness.

1. **Pension Plans-** Pension during your old age. These policies are most suited for senior citizens and those planning a secure future, so that you never give up on the best things in life.
 - » **Pradhan Mantri Vaya Vandana Yojana**
 - » **LIC's New Jeevan Nidhi-** Plan is a conventional with profits pension plan with a combination of protection and saving features. This plan provides for death cover during the deferment period and offers annuity on survival to the date of vesting

- » **LIC's Jeevan Shanti-** is a single premium plan wherein the Policyholder has an option to choose an Immediate or Deferred annuity.

The annuity rates are guaranteed at the inception of the policy for both Immediate and Deferred Annuity and annuities are payable throughout the life time of Annuitant(s).

2. **Unit Plans-** Unit plans are investment plans for those who realise the worth of hard-earned money. These plans help you see your savings yield rich benefits and help you save tax even if you don't have consistent income.
3. **LIC's New Endowment Plus-** is a unit linked non-participating endowment assurance plan which offers investment cum insurance cover during the term of the policy. This plan is specially designed for you to provide a very good combination of protection and long term savings and also provides you greater flexibility to build a better life and realise your dreams.

You have a choice of investing premiums in one of the four types of investment funds available. Premiums paid after deduction of Premium Allocation Charge will purchase units of the Fund type chosen. The unit fund is subject to various charges and value of units may increase or decrease, depending on Net Asset Value (NAV).

1. **Payment of Premiums:** You may pay premiums regularly at yearly, half-yearly, quarterly or monthly (through ECS mode only) intervals over the term of the policy.

A grace period of 30 days will be allowed for payment of yearly or half-yearly or quarterly premiums and 15 days for monthly (ECS) premiums.

2. **Benefits:**

- A) **Death Benefit-** On death of the Life Assured before the stipulated Date of Maturity provided policy is in force, then

On death before the Date of Commencement of Risk:

An amount equal to the Policyholder's Fund Value shall be payable.

On death after the Date of Commencement of Risk:

An amount equal to the higher of Basic Sum Assured or Policyholder's Fund Value shall be payable. Where, Basic Sum Assured is $(10 * \text{Annualized Premium})$ or $(105\%$ of the total premiums paid), whichever is higher.

B) **Maturity Benefit:**

On Life Assured surviving the date of maturity provided the policy is in force, an amount equal to Policyholder's Fund Value shall be payable.

3. **Optional Benefits:**

The policyholder has an option of availing LIC's Linked Accidental Death Benefit Rider .

16.11.6 MICRO INSURANCE PLANS

LIC's Micro Insurance Plans are not plans but opportunities that knock on your door once in a lifetime. These plans are a perfect blend of insurance, investment and a lifetime of happiness.

1. Endowment Plan-

» **LICs New Jeevan Mangal-** is a protection plan with return of premiums on maturity, where you may pay the premiums either in lump sum or regularly over the term of the policy. This plan has an in-built Accident Benefit which provides for double risk cover in case of accidental death

2. Health Plans:

» **LIC's Jeevan Arogya-** is a unique non-participating non-linked plan which provides health insurance cover against certain specified health risks and provides you with timely support in case of medical emergencies and helps you and your family remain financially independent in difficult times.

Health has been a major concern on everybody's mind, including yours. In these days of skyrocketing medical expenses, when a family member is ill, it is a traumatic time for the rest of the family. As a caring person, you do not want to let any unfortunate incident to affect your plans for you and your family. So why let any medical emergencies shatter your peace of mind.

» **LIC's Cancer Cover-** (A non-linked, non-participating, health insurance plan) LIC's Cancer Cover is a regular premium payment health insurance plan which provides financial protection in case the Life Assured is diagnosed with any of the specified Early and/or Major Stage Cancer during the policy term. The policy can be purchased offline as well as online.

The plan offers two benefit options wherein you have the flexibility to choose the type of Sum Insured at the inception.

Option I Level Sum Insured: The Basic Sum Insured shall remain unchanged throughout the policy term.

Option II Increasing Sum Insured: The Sum Insured increases by 10% of Basic Sum Insured each year for first five years starting from the first policy anniversary or until the diagnosis of first event of Cancer, whichever is earlier. On diagnosis of any specified Cancer as mentioned in Para 1, all the claims shall be based on the Increased Sum Insured at the policy anniversary coinciding or prior to the diagnosis of the first claim and further increases to this Sum Insured will not be applicable.

The benefits payable under the plan shall be based on the Applicable Sum Insured, where the Applicable Sum Insured shall be equal to- • The Basic Sum Insured for policies taken under Option I; or • Basic Sum Insured during first year and Increased Sum Insured thereafter, as per the provisions detailed in Option II.

1. Benefits-

The following benefits are payable during the policy year under an inforce policy:

A. Early Stage Cancer: Benefits payable on first diagnosis of any one of the specified Early Stage Cancers, provided the same is admissible are –

- (a) Lump sum benefit: 25% of Applicable Sum Insured shall be payable.
- (b) Premium Waiver Benefit: Premiums for next three policy years or balance policy term whichever is lower, shall be waived from the policy anniversary coinciding or following the date of diagnosis.

16.12 DOCUMENTS REQUIRED FOR LIC LIFE INSURANCE

The following documents are required for LIC Life Insurance-

- **Age Proof:** School certificate, passport, PAN card, driving license.
- **Residence proof:** Ration card, election card, electricity bill, water bill, telephone bill, credit card bill, bank passbook, driving license, rent agreement, passport etc.
- **Photo ID proof:** PAN card, D/L, passport, election card, Ration card & bank pass book with the proposers photograph on it.
- **Income proof:** Salary slip, form 16, Income tax returns, pension pass book etc., if total premium exceeds Rs. one lakh.

16.13 RIDERS OFFERED BY LIC LIFE INSURANCE

The following riders are offered by LIC

- LIC's Linked Accidental Death Benefit Rider
- LIC's Accidental Death and Disability Benefit Rider
- LIC's Accident Benefit Rider
- LIC's New Critical Illness Benefit Rider
- LIC's New Term Assurance Ride

16.14 EXCLUSIONS OF LIC LIFE INSURANCE

A policyholder would not be eligible to file the claims in the following cases:

- In case, the policyholder commits suicide, no claims will be entertained
- In case, the premium is paid for less than twelve months, no benefit will be paid to the beneficiary

- In case, the premium is paid for more than twelve months, than the beneficiary gets 80% of the total premium paid. In such cases, the sum assured will not be paid.

16.15 CLAIM PROCESS OF LIC LIFE INSURANCE COMPANY

Simplified procedures need to be followed to receive claims on maturity. The Branch Office which is serving the policyholder sends a letter, two months before the due date of maturity, informing the date of policy monies payable to the policyholder.

The policyholder has to send back the “Discharge Form” duly completed and the original copy of the Policy Document. On receipt of these two documents, a postdated cheque is sent via post to the policyholder.

In cases of “Money Back Policies”, these documents are not asked for; provided the premiums under the policy are paid till the date of the anniversary.

For any other claim related query, the policyholder can visit or call the nearest branch office of LIC.

The procedure for settlement of maturity and death claims is as follows:

Maturity Claims-

- 1) For endowment policies, the sum assured is payable at the end of the policy period. The branch that services the policy will send out a letter stating the date on which the policy proceeds are payable to the life assured. The individual is required to return the discharge form, fully completed, along with the policy document. On the receipt of these documents, a post-dated cheque is delivered by post so that it reaches the life assured before the due date.
- 2) Plans like money back policies make periodical payments to the life assured, provided premium are paid up to the anniversary due for survival benefit. In cases where the amount payable is Rs. 60,000 and below, cheques will be released without calling for the discharge receipt or policy document. However, for higher amounts, the insurance company will insist on these two.

Death Claims-

In the event of the life assured’s demise, the branch office will ask for the following documents:

- Claim form A - Claimant’s statement providing details of the deceased and the claimant.
- Original policy document
- Certified extract from death register
- Documentary proof of age, if age is not admitted

- Evidence of title to the deceased's estate in case the policy is not nominated, assigned or issued under M.W.P. Act.

The following forms may be asked if death takes place within 3 years from the date of risk or from date of revival.

- Claim Form B – Medical attendant's certificate
- Claim Form B1 – If the life assured has received treatment in a hospital
- Claim form B2 – This needs to be filled by the medical attendant who treated the life assured prior to his or her last illness.
- Claim Form C – Certificate of Identity and burial or cremation to be completed by a person of known character.
- Claim form E – Certificate by Employer (if the life assured was an employed person)
- Certified copies of FIR, the post-mortem report and police investigation report, if the cause of death was an accident or unnatural cause.

16.16 SUMMARY

Life Insurance in its modern form came to India from England in the year 1818. Oriental Life Insurance Company started by Europeans in Calcutta was the first life insurance company on Indian Soil. All the insurance companies established during that period were brought up with the purpose of looking after the needs of European community and Indian natives were not being insured by these companies. However, later with the efforts of eminent people like Babu Muttylal Seal, the foreign life insurance companies started insuring Indian lives. But Indian lives were being treated as sub-standard lives and heavy extra premiums were being charged on them. Bombay Mutual Life Assurance Society heralded the birth of first Indian life insurance company in the year 1870, and covered Indian lives at normal rates. Starting as Indian enterprise with highly patriotic motives, insurance companies came into existence to carry the message of insurance and social security through insurance to various sectors of society. Bharat Insurance Company (1896) was also one of such companies inspired by nationalism. The Swadeshi movement of 1905-1907 gave rise to more insurance companies. The United India in Madras, National Indian and National Insurance in Calcutta and the Co-operative Assurance at Lahore were established in 1906. In 1907, Hindustan Co-operative Insurance Company took its birth in one of the rooms of the Jorasanko, house of the great poet Rabindranath Tagore, in Calcutta.

16.17 TEST YOUR PROGRESS

- Q1. When was LIC established in India?
- A. 1908
 - B. 1915

C. 1956

D. 1965

Answer: C. 1956

Q2. Which of the following are the features of LIC?

A. Savings institution

B. Term financing institution

C. Investment institution

D. All of the above

Answer: D. All of the above

Long type Questions

1. Explain the history of LIC, what is its significance and importance?
2. Write Features and advantages of LIC?
3. What disadvantages of LIC?
4. Explain milestones in the life insurance business in India?
5. Describe the structure of LIC?
6. Explain the process of operations of LIC?
7. What are various types life insurance plans?

16.18 SUGGESTED READINGS

- Fuller, Russell J., and Farrell, James L. 1987. Modern Investments and Security Analysis, New York : McGraw-Hill Book Co.
- Reilly, Frank K. 1979, Investment Analysis & Portfolio Management, Hinsdale, Illinois : The Dryden Press.
- Pandian Punithavathy, 2001, Security Analysis and Portfolio Management, Vikas Publishing House Pvt. Ltd., New Delhi.
- Kevin S., 2000, Portfolio Management, Prentice-Hall of India Pvt. Ltd., New Delhi.

UNIT-17 UNIT TRUST OF INDIA

UNIT STRUCTURE

- 17.0 Objectives
- 17.1 Introduction
- 17.2 Organization and Management
- 17.3 Objectives of Unit Trust of India (UTI)
- 17.4 Functions of UTI
- 17.5 Advantages of UTI
- 17.6 UTI Mutual Fund
- 17.7 Mutual Fund Schemes
- 17.8 Documents Required To Invest In Mutual Funds
- 17.9 Procedure of Investment
- 17.10 Summary
- 17.11 Test Your Progress
- 17.12 Suggested Readings

17.0 OBJECTIVES

After studying this unit the learner have knowledge about

- Organization and Management
- Objectives of Unit Trust of India (UTI)
- Functions of UTI
- Advantages of UTI
- UTI Mutual Fund
- Mutual Fund Schemes

17.1 INTRODUCTION

Unit Trust of India was first Set up in 1st February 1964 under the Unit Trust of India Act, 1963. It is a statutory public sector investment institution having the main objective to encourage and mobilize the savings of the community and canalize them into productive corporate investment.

A unit trust is an investment plan in which the funds are pooled together and then invested. The fund which is pooled is then unitized and the investor who is one

party to the unit trust is called a unitholder, holding a certain number of units. A second party i.e the manager is responsible for the day-to-day running of the trust and for investing the funds.

The trustee, governed by the Trust Companies Act 1967, is the third party, and their role is to monitor the manager's performance against the trust's deed. The deed outlines the objectives and vital information about the trust. Also, the assets of the trust are held in the name of the trustee and then they are held "in trust" for the unitholders.

17.2 ORGANISATION AND MANAGEMENT

UTI was established with an initial capital of Rs. 5 crore, contributed by the RBI, LIC, SBI and its subsidiaries and scheduled banks and financial institutions. The initial capital of Rs. 5 crore was divided into 1,000 certificates of Rs. 50,000 each. To supplement its financial resources, the trust can borrow from the Reserve Bank of India, the amount being repayable on demand' or within a period of 18 months.

UTI is managed by a Board of Trustees, consisting of a chairman and four members nominated by Reserve Bank of India, one member nominated by LIC, one member nominated by the State Bank of India, and two members elected by the contributing institutions.

17.3 OBJECTIVES OF UNIT TRUST OF INDIA (UTI)

Unit Trust of India provides to the investor a safe return of the investment whenever they require funds. UTI provides daily price record and advertises it in the newspapers.

Thus, two prices are quoted on a daily basis, the purchase price and the sale price of the units. This price may fluctuate daily, but the fluctuations are nominal on a monthly basis.

The price varies between the month of July and the month of June. The purchase price of the various units is the lowest in the month of July.

An investor who wants to make an investment may purchase his units at this time of the year and receive the lowest offer price for the units.

The basic objective of the UTI is to offer both small and large investors the means of acquiring shares in the properties resulting from the steady, industrial growth of the country.

Primary Objectives of UTI-

- to promote and pool the small savings from the lower and middle-income persons who cannot have direct access to the stock exchange, and
- to provide them with an opportunity to share the benefits of prosperity resulting from rapid industrialization in India.

17.4 FUNCTIONS OF UTI

- Mobilize the saving of the relatively small investors.
- Channelize these small savings into productive investments.
- Distribute the large scale economies among small income groups.
- Encourage savings of lower and middle-class people.
- Sell nits to investors in different parts of the country.
- Convert the small savings into industrial finance.
- To give investors an opportunity to share the benefits and fruits of industrialization in the country.
- Provide liquidity to units.
- Accept discount, purchase or sell bills of exchange, warehouse receipt, documents of title to goods etc.,
- To grant loans and advances to investors.
- To provide merchant banking and investment advisory service to investors.
- Provide leasing and hire purchase business.
- To extend portfolio management service to persons residing in other countries.
- To buy or sell or deal in foreign currency.
- Formulate a unit scheme or insurance plan in association with GIC.
- Invest in any security floated by the RBI or foreign bank.

17.5 ADVANTAGES OF UTI

The advantages of Unit Trust are:

- The investment is safe and divides the risk over a wide range of securities.
- The investors will be getting a regular and good income, as it distributes 90 percent of its income.
- Dividends up to Rs. 1,000 received by the individual investors are exempt from income-tax.
- There is a high degree of liquidity of investment as one can sell the units back to the trust at any time at a specific price.
- You have experts who are doing the hard work for you.
- There are various unit trusts to choose from.
- Investor's resources are pooled with other investors, allowing you to make investments impossible as an individual investor.

- It also helps Investor's to easily diversify your investments.
- An investor gets the benefits of greater economies of scale, such as reduced transaction costs.

17.6 DISADVANTAGES OF UTI

The Disadvantages of investing in unit trusts:

- 1) Unit trust may have high cost base if you are investing directly.
- 2) Unit trusts may not be liquid and early termination costs may apply for premature termination.
- 3) Unit trusts are generally medium to long-term investments, which may not suit all investors. ·
- 4) The volatility in the investment, as prices fluctuate daily according to market movements, may not suit all investors' needs.
- 5) Investors can be tempted to redeem their unit trusts in the short-term.
- 6) Because professionals administer unit trusts, there are certain costs involved.

17.6 UTI MUTUAL FUND

UTI Mutual Fund was carved out of the erstwhile **Unit Trust of India** (UTI) as a SEBI registered mutual fund from 1 February 2003. The Unit Trust of India Act 1963 was repealed, paving way for the bifurcation of UTI into – Specified Undertaking of Unit Trust of India (SUUTI); and UTI Mutual Fund (UTIMF).

UTI Mutual Fund is promoted by the four of the largest Public Sector Financial Institutions as sponsors, viz., State Bank of India, Life Insurance Corporation of India, Bank of Baroda and Punjab National Bank with each of them holding an 18.24% stake in the paid up capital of UTI AMC.

On Dec 04, 2019, Board of SBI approved dilution 8.25% stake in UTI MF through IPO. After which, the stake of SBI in UTI MF will be reduced to approx 10%.

T Rowe Price Group Inc (TRP Group) through its wholly owned subsidiary T Rowe Price Global Investment Services Ltd. (TRP) has acquired a 26% stake in UTI Asset Management Company Limited (UTI AMC).

UTI Mutual Fund is the oldest and one of the largest mutual funds in India with over 10 million investor accounts under its 230 domestic schemes / plans as on September 30, 2017.^[2]

UTI Mutual Fund has a nationwide distribution network, which is spread across the length and breadth of the country. Its distribution network comprises

over 48000 AMFI/NISM certified Independent Financial Advisors and 150 Financial Centers.

UTI Mutual Fund has been the pioneer for launching various schemes viz. UTI Unit Linked Insurance Plan (ULIP) with life & accident cover (Launched in 1971), UTI Mastershare (Launched in 1986), India's first Offshore Fund – India fund (Launched in 1986), UTI Wealth Builder Fund, the first of its kind in the Indian mutual fund industry combining different asset classes i.e. equity and gold which are lowly correlated.

17.6.1 SIGNIFICANCE OF UTI MUTUAL FUNDS

In 2003, the Unit Trust of India was bifurcated into two components- the SUUTI and the UTI Mutual Funds or UTIMF. The UTI Mutual Fund was registered with the SEBI on the First of February 2003.

4 of the largest PSU banks now back this Mutual Fund.

All UTI Mutual Funds are managed by the UTI Asset Management Company Ltd. The 4 big partners- State Bank of India, the PNB or Punjab National Bank, Bank of Baroda, and the Life Insurance Corporation of India each holds 18.24% of the shares in the UTI ME.

A significant share of 26% is held by the T Rowe Price Group Inc, also known as the TRP Grou, and controlled by its subsidiary - T Rowe Price Global Investment Services Ltd.

The UTI Mutual Fund is precedes most renowned Mutual Funds in India. Its investors number nearly 11 million and there are over 250 plans currently operational with a total AuM of nearly Rs 1.59 Lakh Crore.

What makes these offers attractive is their distribution. There is no other provider of Mutual Funds in India with a larger outreach of services. Even the best UTI Mutual Funds reach out to most of rural and semi-urban regions of India.

There are over 50,000 AMFI and NSFM certified Independent Advisors on Finance who are spread all over the country who work on behalf of UTI Mutual Funds. There are over 200 full-time Financial Service Centres too.

One of the most popular and long-running Mutual Fund schemes is the UTI Mastershare, which was launched by the then-extant UTI in 1986.

The UTI Mutual Fund persists as a pioneer in the industry in the domestic sector. It was the first to offer a Unit Linked Insurance Plan or ULIP in 1971 with added life and accident cover. It also reached another milestone in 1986 with what was India's first Offshore fund, called simply the 'India Fund.'

One of the feats achieved by the UTI Asset Management company was to create the UTI Wealth Builder Fund which links two separate but closely related asset classes- Gold and Equity. Thanks to the huge number of subscribers, the UTI Mutual Fund is still going strong in the Indian market.

The fund managers at UTI Asset Management, which manages the Mutual Funds, have divested widely and are involved in a wide array of businesses including retirement solutions, portfolio management solutions, International Banking and alternative assets management.

17.7 MUTUAL FUNDS SCHEMES

1. UTI Liquid Cash Fund:

Fund Details- The fund category is Liquid Fund with an AUM of ₹31,147.14 Crores as on 31st July 2020. The scheme was launched on 10-Dec-2003. This UTI Mutual Fund NAV for the Direct Plan, Growth was ₹3,306.69 as on 25-Aug-2020 and the same for Regular Plan, Growth was ₹3,291.18. The fund has given 7.24% average annualised return (CAGR) since inception. The benchmark for this scheme is CRISIL Liquid Index and the fund manager is Mr. Amit Sharma and Mr. Amandeep Chopra.

Historical performance of UTI Liquid Cash Fund - Direct Plan - Growth for the last 5 years, as on 25th Aug 2020

The expense ratio of the UTI Liquid Cash Fund - Direct Plan is 0.16% for direct plan and 0.23% for regular plan. There would be an exit load of 0.0070% for redemption within 1 day, 0.0065% for redemption within 2 days, and 0.0060% for redemption within 3 days, 0.0055% for redemption within 4 days, 0.0050% for redemption within 5 days and 0.0045% within 6 days.

UTI Liquid Cash Fund - Direct Plan predominantly invests in treasury bills. Here is the detailed table on holding for this scheme.

2. UTI Nifty Exchange Traded Fund-

Investment Objective- The fund objective of the UTI Nifty Exchange Traded Fund is to generate long-term capital appreciation by investing in stocks comprising Nifty 50 Index. The fund predominantly invests in stocks of companies that mirror the performance of the Nifty 50 Index. The fund follows a passive investing strategy.

Fund Details- The fund category is Equity ETF Fund with an AUM of ₹17,571.94 Crores as on 31st July 2020. The scheme was launched on 01-Sept-2015. This UTI Mutual Fund NAV for the regular plan, Growth was ₹1,220.52 as on 25-Aug-2020.

The fund has given 9.40% average annualised return (CAGR) since inception. The benchmark for this scheme is Nifty 50 TRI Index and the fund manager is Mr. Sharwan Kumar Goyal.

Historical performance of UTI Nifty Exchange Traded Fund “ Regular Plan “ Growth for the last 3 years, as on 25th Aug 2020

The expense ratio of the UTI Nifty Exchange Traded Fund is 0.07% for regular plans. There would be no exit load for the investments made into this scheme.

UTI Nifty Exchange Traded Fund has a strong exposure to the energy, financial and technology sectors. Here is the detailed table on holding for this scheme.

The minimum lump sum investment in UTI Nifty Exchange Traded Fund is ₹5,000 and for SIP it is ₹500.

3. UTI Equity Fund - Direct Plan-

- **Investment Objective-** The fund objective of the UTI Equity Fund-Direct Plan is to create long-term wealth by predominantly investing in equity instruments across various market capitalisation spectrum.
- **Fund Details-** The fund category is Equity Multicap Fund with an AUM of ₹10,257.21 Crores as on 31st July 2020. The scheme was launched on 18-May-1992. This UTI Mutual Fund NAV for the Direct Plan, Growth was ₹161.58 as on 25-Aug-2020 and the same for Regular Plan, Growth was ₹156.32. The fund has given 13.02% average annualised return (CAGR) since inception. The benchmark for this scheme is the Nifty 500 TRI Index and the fund manager is Mr. Ajay Tyagi.

Historical performance of UTI Equity Fund - Direct Plan - Growth for the last 5 years, as on 25th Aug 2020

The expense ratio of the UTI Equity Fund-Direct Plan-Growth is 1.30% and 1.99% for regular plans. There would be an exit load of 1% if you redeem more than 10% of the units purchased within 365 days from the date of investment.

UTI Equity Fund has a strong exposure to the financial and technology sectors. Here is the detailed table on holding for this scheme.

4. UTI Mastershare Fund - Direct Plan-

- **Investment Objective-** The fund objective of the UTI Mastershare Fund is to provide long-term capital appreciation. The fund predominantly invests in equity and equity related securities of large cap companies. This is India's first equity oriented fund that was launched in 1986. The fund maintains a well-diversified portfolio to achieve growth.
- **Fund Details-** The fund category is Equity Large Cap Fund with an AUM of ₹6,142 Crores as on 31st July 2020. The scheme was launched on 15-Oct-1986. This UTI Mutual Fund NAV for the Direct Plan, Growth was ₹132.03 as on 25-Aug-2020 and the same for Regular Plan, Growth was ₹125.81. The fund has given 12.02% average annualised return (CAGR) since inception. The benchmark for this scheme is S&P BSE 100 TRI Index and the fund manager is Ms. Swati Kulkarni.

Historical performance of UTI Mastershare Fund " Direct Plan " Growth for the last 5 years, as on 25th Aug 2020

The expense ratio of the UTI Mastershare Fund is 1.98% for regular plan and 1.09% for direct plan. There would be an exit load of 1% if you redeem more than 10% of the units purchased within one year from the date of investment.

UTI Mastershare Fund has a strong exposure to the technology, financial and communication sector. Here is the detailed table on holding for this scheme.

5. UTI Hybrid Equity Fund - Direct Plan-

- **Investment Objective-** The Investment Objective of the UTI Hybrid Equity Fund - Direct Plan is to generate inflation-beating return over the long-term by predominantly investing in an ideal mix of equity and debt instruments.
- **Fund Details-** The fund category is Aggressive Hybrid Fund with an AUM of ₹3,708.95 Crores as on 31st July 2020. The scheme was launched on 02-Jan-1995. This UTI Mutual Fund NAV for the Direct Plan, Growth was ₹172.68 as on 25-Aug-2020 and the same for Regular Plan, Growth was ₹165.76. The fund has given 9.13% average annualised return (CAGR) since inception. The benchmark for this scheme is CRISIL Hybrid 25+75 Aggressive Index and the fund manager is Mr. Sunil Madhukar Patil.

Historical performance of UTI Hybrid Equity Fund “Direct Plan” Growth for the last 5 years, as on 25th Aug 2020

The expense ratio of the UTI Hybrid Equity Fund “Direct Plan is 1.32% and 1.98% for regular plan. There would be an exit load of 1% if you redeem more than 10% units within one year from the date of investment.

UTI Hybrid Equity Fund-Direct Plan equity investments are focused into the technology and financial sector. Debt part of the portfolio mainly invests in GOI securities. Here is the detailed table on holding for this scheme.

17.8 DOCUMENTS REQUIRED TO INVEST IN MUTUAL FUND

It is necessary to have your KYC (Know Your Customer) details verified to invest in mutual funds in India. At Paytm Money, you can get your KYC done in a fully digital and hassle-free manner, and start investing in mutual funds of UTI Mutual Fund.

If you are a first-time investor, then you need to submit the following documents:

- i. PAN Card Details
- ii. Personal Details
- iii. Address Proof
- iv. Bank Account Details
- v. Nominee & FATCA Declarations

However, if you are an existing investor, then you need to furnish only a few personal & bank account details & you can start investing instantly.

17.9 PROCEDURE OF INVESTMENT IN MUTUAL FUNDS

Mutual funds offer you a wide range of investment options across the asset classes, be it equity or debt, and even within the sub-categories of asset classes like mid-cap stocks, large-cap stocks etc. If you are wondering regarding how to invest in mutual funds, There are two modes to apply in UTI mutual funds: offline mode and online mode. We will discuss both the modes one-by-one.

- A) Offline Mode-** This is the traditional mode of making investments in mutual funds, wherein the form is submitted physically and thereafter the entire data is digitized and processed. Here are the steps to invest in mutual funds through offline mode:
1. Fill the KYC (Know Your Customer) form along with the application if you are investing in mutual funds for the first time. KYC serves as your information repository for the mutual fund house and is required for making investments more than Rs. 50,000 in a year.
 2. Fill the application form of the desired mutual fund schemes, where the investment is to be made. This application form can be downloaded from the website of the respective mutual fund house or procured from the investor service center of the mutual fund or the Registrar and Transfer Agent (RTA).
 3. You can also choose to register for a SIP or Systematic Investment Plan, which allows you to invest a fixed sum every month into the mutual fund scheme of your choice.
 4. Submit the application form along with necessary enclosures/cheque at the authorized collection centers of the mutual fund or the Registrar and Transfer Agent (RTA).
 5. A time-stamped acknowledgment will be provided you at the time of submission.
 6. On the next working day after the submission, you will receive a transaction confirmation message on your mobile number and the account statement with the transaction if you have also provided your email address.
- B) Online Mode-** With the advent of digital banking and digital investing, it has now become possible to make an investment in mutual funds online with just a click of a button and there is no need to physically visit the mutual fund house to make investments. While the steps may slightly differ with different website structures of the respective mutual fund house, the procedure below aims to broadly outline the steps of making online investments in mutual funds:

1. Open the website of the mutual fund house, in which you wish to make an investment. The Registrar and Transfer Agents (RTA) like CAMS, Karvy etc. also allow making investments with their clients' mutual funds through their websites/ mobile apps.
2. Click on the 'Make a Transaction/ Purchase' button on the homepage of the website.
3. The first page will prompt you to input your PAN (Permanent Account Number). Once you enter the PAN number, the system will validate the same against the present database to check if you are an existing investor and if you have completed the KYC form.
4. If you are a new investor and are yet to complete your KYC, the browser will redirect you to process your KYC verification online itself. Once you have completed your KYC, you can continue with your investment process.
5. The online portal will prompt you to input the details one-by-one starting with the scheme details, investment amount, bank details etc.
6. Once you have entered all the details, the portal will check if you want to make a lumpsum investment or SIP investment. In case of SIP, further details like number of installments, monthly SIP date, SIP amount etc. will also be required to be entered. Further, once you input the details for SIP registration, you will receive a SIP Registration Reference Number, which you need to further register for automatic bill payment with your bank through the netbanking login.
7. After you have entered the desired details, the system will redirect you to the payment gateway where the payment is required to be made towards the investment.
8. Upon successful payment transaction, a transaction confirmation will be displayed on the screen with the time stamp. An email is also sent to the registered email address with the transaction confirmation, followed by the account statement.

17.10 SUMMARY

Unit Trust of India was first Set up in 1st February 1964 under the Unit Trust of India Act, 1963. It is a statutory public sector investment institution having the main objective to encourage and mobilize the savings of the community and canalize them into productive corporate investment.

UTI was established with an initial capital of Rs. 5 crore, contributed by the RBI, LIC, SBI and its subsidiaries and scheduled banks and financial institutions. The initial capital of Rs. 5 crore was divided into 1,000 certificates of Rs. 50,000 each. To supplement its financial resources, the trust can borrow from the Reserve Bank of India, the amount being repayable on demand' or within a period of 18 months.

17.11 TEST YOUR PROGRESS

1. Define Organization and Management of LIC
2. Write objectives of Unit Trust of India (UTI)
3. What are Functions of UTI
4. Explain the advantages of UTI
5. What is UTI Mutual Fund
6. Explain various Mutual Fund Schemes
7. What are the documents Required To Invest In Mutual Funds
8. Explain the Procedure of Investment in mutual funds

17.12 SUGGESTED READINGS

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UNIT-18 MUTUAL FUNDS

UNIT STRUCTURE

- 18.0 Objectives
- 18.1 Introduction
- 18.2 History Of Mutual Fund Industry In India
- 18.3 Significance Of Mutual Funds
- 18.4 Features Of Mutual Funds
- 18.5 Working Of Mutual Funds
- 18.6 Structure Of Mutual Funds In India
- 18.7 Types Of Mutual Funds Schemes
- 18.8 Classification Of Mutual Funds
- 18.9 Performance Measurement and Evaluation of Mutual Fund Schemes
- 18.10 Difference Between Public And Private Mutual Funds In India
- 18.11 Advantages Of Investing In Mutual Funds
- 18.12 Drawbacks Of Mutual Funds
- 18.13 Growth And Performance Of Mutual Funds In India
- 18.14 Summary
- 18.15 Test Your Progress
- 18.16 Suggested Readings

18.0 OBJECTIVES

After studying this module, you shall be able to:

- Learn about the growth and performance of Mutual funds in India
- Learn about the evolution and contribution in the form of associates and promotional institutions to the industrial sector of economy by the UTI
- Learn about various products offered by the UTI
- Evaluate the difference between the public and private mutual funds in India

18.1 INTRODUCTION

A mutual fund is simply a financial intermediary that allows a group of investors to pool their money together with a predetermined investment objective. The mutual funds are one of the best investments ever created because they are very cost efficient and very easy to invest in. By pooling money together in a mutual fund, the investors can purchase stocks or bonds with much lower trading costs than if they tried to do it on their own. But the biggest advantage of mutual funds is diversification. The money collected is invested in different types of securities by the fund manager depending upon the objective of the scheme. The income earned through these investments and the capital appreciation realised by the scheme are shared by its unit holders in proportion to the number of units owned by them (pro-rata).

The combined holdings, the mutual fund owns, are known as its portfolio. The income earned through these investments and the capital appreciation realised are shared by its unit holders in proportion to the number of units owned by them.

18.2 HISTORY OF MUTUAL FUND INDUSTRY IN INDIA

The origin of mutual fund industry in India was with the introduction of the concept of mutual fund by Unit Trust of India in the year 1963. Though the growth was slow, but it accelerated from the year 1987 when non-UTI players entered the industry. The Indian mutual fund industry can be broadly put into the following four phases according to the development of the sector:

First Phase (1964-1987)- The Unit Trust of India (UTI) was established in 1963 by an Act of Parliament. It was set up by the Reserve Bank of India and functioned under the regulatory and administrative control of the Reserve Bank of India. In 1978 UTI was de-linked from RBI. The first scheme launched by UTI was Unit Scheme 1964 (US-64). The other notable and popular schemes launched by UTI were Unit Linked Insurance Plan (ULIP), Monthly Income Scheme (MIS), Children Gift Growth Fund (CGGF) during this phase.

Second Phase (1987-1993) Entry of Public Sector Funds- This phase started with the entry of non-UTI mutual funds. The SBI Mutual Fund (1987) was the first followed by Canbank Mutual Fund(1987), Punjab National Bank Mutual Fund (1989), Indian Bank Mutual Fund(1989), Bank of India Mutual Fund (1990), Bank of Baroda Mutual Fund(1992). LIC Mutual Fund in 1989 and GIC Mutual Fund in 1990.

Third Phase-(1993-2003) Entry of Private Sector Funds- In the third phase, with the entry of private sector funds in 1993, a new era started in the Indian mutual fund industry, giving the Indian investors a wider choice of fund families. Also, 1993 was the year in which the first Mutual Fund Regulations came into being, under which all mutual funds, except UTI were to be registered and governed. The erstwhile Kothari Pioneer mutual fund (now merged with Franklin Templeton) was the first private sector mutual fund registered in July 1993.

The 1993 SEBI (Mutual Fund) Regulations were substituted by a more comprehensive and revised Mutual Fund Regulations in 1996. The industry now started functioning under the SEBI (Mutual Fund) Regulations 1996. The number of mutual fund houses went on increasing, with many foreign mutual funds setting up funds in India and also the industry witnessed several mergers and acquisitions.

Fourth Phase- since February 2003- This phase had bitter experience for UTI. It was bifurcated into two separate entities. The first specified undertaking of the Unit Trust of India with AUMs of Rs.29, 835 crores (as on January 2003). It functions under an administrator and under the rules framed by Government of India and does not come under the purview of the Mutual Fund Regulations, governed by SEBI.

The second is the UTI Mutual Fund Ltd, jointly sponsored by SBI, PNB, BOB and LIC. It is registered with SEBI and functions under the Mutual Fund Regulations. With the bifurcation of the erstwhile UTI which had in March 2000 more than Rs.76, 000 crores of AUMs and with the setting up of a UTI Mutual Fund, conforming to the SEBI Mutual Fund Regulations and with recent mergers taking place among different private sector funds, the mutual fund industry has entered its current phase of consolidation and growth.

In the year 1992, Securities and Exchange Board of India (SEBI) Act was passed with the objectives to protect the interests of investors in securities and to promote the development of and to regulate the securities market. As far as mutual funds are concerned, SEBI formulates policies and regulates the mutual funds to protect the interests of the investors. SEBI notified the regulations for the mutual funds in 1993. The regulations were fully revised in 1996 and have been amended thereafter from time to time. The SEBI has also issued guidelines to the mutual funds periodically to protect the interests of investors.

18.3 SIGNIFICANCE OF MUTUAL FUNDS

All mutual funds whether promoted by public sector or private sector entities including those promoted by foreign entities are governed by the same set of regulations. There is no distinction in regulatory requirements for these mutual funds and all are subject to monitoring and inspections by SEBI. The risks associated with the schemes launched by the mutual funds sponsored by these entities are of similar type.

A mutual fund is an ideal investment vehicle for today's complex and modern financial scenario. The markets for equity shares, bonds and other instruments, real estate, 60 derivatives and other assets have become mature and information driven. The price changes in these assets are driven by global events occurring in different countries. The mutual fund is a mechanism for pooling the resources by issuing units to the investors and investing the funds in securities in accordance with objectives as disclosed in the offer document. Investments in securities are spread across a wide cross-section of industries and sectors and thus the risk is reduced. Diversification reduces the risk because all stocks may not move in the same direction in the same proportion at the same time. The mutual

fund issues units to the investors in accordance with quantum of money invested by them. The investors of mutual funds are known as unit holders.

The profits or losses are shared by the investors in proportion to their investments. The mutual funds normally come out with a number of schemes with different investment objectives which are launched from time to time. A mutual fund in India is required to be registered with Securities and Exchange Board of India (SEBI) which regulates securities markets, before it can collect funds from the public.

If one is quite knowledgeable about investing, have enough money to purchase shares of companies in different industries to allow for diversification, and have time to research stocks, then may be investing in individual shares is a good starting point. On the other hand If one has limited knowledge about investing, have a small amount of money that one can invest regularly, and is not comfortable with the ups and downs of individual shares, then mutual funds may be a better fit.

18.4 FEATURES OF MUTUAL FUNDS

The various features of mutual funds are as follows:

- 1) Mutual funds is a non- depository or non- banking financial intermediary.
- 2) Mutual funds mobilizes the savings from the people and invest them in the mix of corporate and government securities.
- 3) Mutual funds brings a variety of securities within the reach of the most modest investors.
- 4) Mutual funds create awareness among the urban and rural middle class about the benefits of investment in capital markets.
- 5) Mutual funds are controlled and regulated by SEBI and are therefore considered to be safe.
- 6) Mutual fund is an indirect form of investment i.e the investors invest in mutual funds and the mutual fund invest in shares, bonds, debentures and other securities in the capital market.
- 7) Mutual fund works as the representatives of the investors.

Some common mistakes, mutual fund investors make and should avoid :

1. Failing to have a good understanding of the objectives, policies and risks of the funds the investors buy. This can lead to unsuitable investments and unexpected losses.
2. Investing in the wrong funds even though they may be in the right categories. Losers will tend to exhibit either high costs, excessive sales charges or poor management.

3. Using the rear-view mirror approach of buying volatile funds that were top performers over the most recent year or quarter.
4. Failing to follow a consistent long-term view of buy- and-hold investing.

18.5 WORKING OF MUTUAL FUND

Working of a mutual fund begins with pooling of money to form fund. Various investors pool in their money to form a big fund. These funds are taken by an Asset management company (AMC) to manage the funds according to various goals of the investor. These asset management companies employ financial experts and managers to understand the current scenario of market and invest the fund in the most profitable sectors of the society.

There are also Trustees of mutual funds who make sure that asset management companies are working in best interest of the investors and their money is safely invested. The asset management company pool money from small investors and invest it into various securities such as shares, stocks and fixed income investments. As everyone knows that it is not always possible that different securities of different sectors work well at the same time, so an asset management company invests the pooled funds in different sectors such as steel, banking, real estate, entertainment etc .Now if a particular sector say steel industries are not giving good returns but other sectors are doing well then the average return of mutual fund investment remains stable. That is the task of financial experts of an asset management company to maintain an average return. Investors in this way are saved from the fluctuations of stock markets and at the same time get an opportunity that even with a meagre contribution they get an opportunity to invest in share market and debt market.

Investors get the benefit of growth in equity and stability of debts. Till now it is clear how a mutual fund work but the question arises what an investor get s as soon as it gives its money to an asset management company. They get 'units'. Units represent the money invested in the fund. These units are redeemable to get back the money. These units have Net Asset Value (NAV).

NAV represents the value of one unit of investor's investment. Total number of units with investors multiplied by NAV gives market value of investors holding. NAV is calculated after deducting all fund expenses and fee of AMC. Investments in mutual funds can be made in lump sum manner or in small amounts at some pre determined intervals. This makes them favourable for all kinds of investors such as salaried people, businessman etc. Every mutual fund has a set benchmark to measure its performance. It is based on Nifty or Sensex. These benchmarks are used to measure the performance of a mutual fund.

The fund managers' task is to analyse the market and cross the set benchmark of the fund. This is the reason for hiring fund managers.

When we invest in a mutual fund, we purchase a certain number of units of the fund. The fund manager buys and sells the investments in the securities markets to maximise returns for the investors within the investment guidelines of a scheme outlined in the prospectus. The fund's value and the value of the units

can go up or down on a day to day basis. Some funds will fluctuate more than others and we would like to consider this factor when we choose a fund.

Many factors influence how the mutual fund performs, including the value of the underlying investments, changes in interest rates and other economic trends, even the buy/sell process. When we purchase units in a mutual fund, we pay certain fees and expenses usually deducted directly from our investment. We should understand these fees, well for both buying and selling the units.

18.5.1 UTI AND MUTUAL FUNDS:

The formation of Unit Trust of India marked the evolution of the Indian mutual fund industry in the year 1963. The main objective of it was to attract the small investors. It was made possible through the collective efforts of the Government of India and the Reserve Bank of India. Eventually many public sector, private sector and foreign fund management companies entered the mutual fund market.

In November 1987, SBI Mutual Fund from the State Bank of India became the first non-UTI mutual fund in India. The Unit Trust of India is one of the leading mutual fund service providers in India. It is commonly known as UTI Mutual Fund all over India. It is managed by UTI Asset Management Company Private Limited which was established on January 14, 2003. UTI Asset Management Company Private Limited has been formed by the UTI Trustee Company Private Limited for dealing with various schemes developed by UTI mutual fund. UTI Asset Management Company Private Limited is located at Mumbai in India.

This will correspond with the provisions of Investment Management Agreement, the Trust Deed, the SEBI (Mutual Funds) Regulations and the objectives that are being assumed by various schemes. Unit Trust of India came into effect from 1st February, 2003. The UTI Mutual Fund offers scheme for the need of various investors. The Unit Trust of India has 70 UTI Financial Centers and UTI International offices in Dubai, London, and Bahrain. The establishment of Unit trust of India actually harbingers the scheme of mutual fund in India.

18.5.2 VARIOUS PRODUCTS OFFERED BY THE UTI

UTI being the pioneer of mutual funds in India offer various schemes to suit the requirements of the various categories of investors. It keeps in mind the risk taking ability of an investor and offers them with a suitable scheme. Some of the schemes are as follows:

Equity Funds- In this option funds are invested in stock of various companies. Here benefits for unit holders are secured by capital appreciation. Funds are invested in equity shares and convertible and non convertible bonds. This product is beneficial for those investors who want Long term capital growth and are ready to take high risk.

Theme Based Mutual Funds- Contra, Dividend Yield, Global, Lifestyle, Value etc are some of the popular themes that the mutual fund industry has played with. The objective of theme based fund is to give best returns by investing the pooled fund in those stocks which are in agreement with a particular theme. So these investments can be in multi sector, international stocks, commodity market etc.

Sector funds- A sector fund is a mutual fund or exchange-traded fund that concentrates its investments in a single sector of the market. These funds are focused on stocks within a certain business or industry. They are more volatile than the stock markets. The different sectors may be Technology, Financials, Communications, Utilities, Natural Resources, Healthcare, Real Estate, Precious Metals etc.

Tax planning funds- These funds satisfy the tax saving need of the investor. They are usually close ended schemes with some lock in period. These funds are related to portfolios that include those securities that make the maximum benefit of the tax exemption under section 80C of the income tax act.

Arbitrage Funds- Arbitrage mutual funds are those funds that are made up of such schemes that take the maximum advantage and benefit of arbitrage opportunities current and the futures market.

Gilt Fund- In these funds money is merely invested in government securities. Government securities are usually risk free. NAVs of these schemes also fluctuate due to change in interest rates and other economic factors as is the case with income or debt oriented schemes.

Index Funds- Index Funds replicate the portfolio of a particular index such as the BSE Sensitive index, S&P NSE 50 index (Nifty), etc. These schemes invest in the securities in the same weightage comprising of an index. NAVs of such schemes would rise or fall in accordance with the rise or fall in the index, though not exactly by the same percentage.

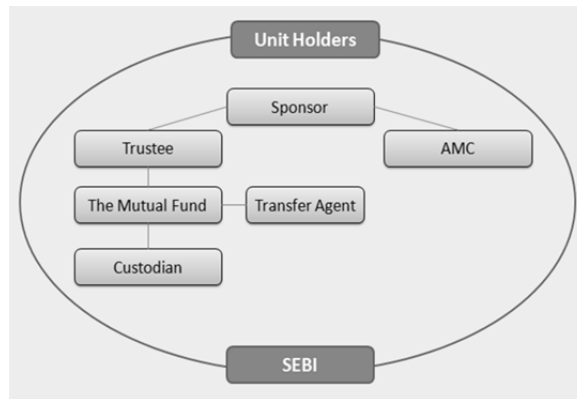
Segment Focused Funds- These funds focus on particular need segment such as retirement benefit, children career etc. These funds retain the flexibility to invest in entire range of equity, debt and money market instruments.

Monthly Income Plan- Monthly income plan of mutual fund is a debt-oriented scheme that generally 75 to 80 percent funds in debt instruments and the remaining in equity instruments. MIPs aim to provide investors with regular income. They are basically taken by passive investors. In short there are many more schemes offered by UTI for their investors. In fact, they keep on developing new schemes according to the requirements. Above mentioned schemes are some of the currently offered schemes or plans.

18.6 STRUCTURE OF MUTUAL FUNDS IN INDIA

The structure of Mutual Funds in India is a three-tier one. There are three distinct entities involved in the process – the sponsor (who creates a Mutual Fund), trustees and the asset management company (which oversees the fund management). The structure of Mutual Funds has come into existence due to SEBI (Securities and Exchange Board of India) Mutual Fund Regulations, 1996.

Under these regulations, a Mutual Fund is created as a Public Trust. We will look into the structure of Mutual Funds in a detailed manner.



The Structure of Mutual Fund

- A. The Fund Sponsor-** The Fund Sponsor is the first layer in the three-tier structure of Mutual Funds in India. SEBI regulations say that a fund sponsor is any person or any entity that can set up a Mutual Fund to earn money by fund management. This fund management is done through an associate company which manages the investment of the fund. A sponsor can be seen as the promoter of the associate company. A sponsor has to approach SEBI to seek permission for a setting up a Mutual Fund. Once SEBI agrees to the inception, a Public Trust is formed under the Indian Trust Act, 1882 and is registered with SEBI. Trustees are appointed to manage the trust and an asset management company is created complying with the Companies Act, 1956.

There are eligibility criteria given by SEBI for the fund sponsor:

- i. The sponsor must have experience in financial services for a minimum of five years with a positive Net worth for all the previous five years.
- ii. The net worth of the sponsor in the immediate last year has to be greater than the capital contribution of the AMC.
- iii. The sponsor must show profits in at least three out of five years which includes the last year as well.
- iv. The sponsor must have at least 40% share in the net worth of the asset management company.
- v. Any entity that fulfills the above criteria can be termed as a sponsor of the Mutual Fund.

- B. Trust and Trustees-** Trust and trustees form the second layer of the structure of Mutual Funds in India. A trust is created by the fund sponsor in favour of the trustees, through a document called a trust deed. The trust is managed by the trustees and they are answerable to investors. They can be seen as primary guardians of fund and assets. Trustees can be formed by two ways – a Trustee Company or a Board of Trustees. The trustees work to monitor the activities of the Mutual Fund and check its

compliance with SEBI (Mutual Fund) regulations. They also monitor the systems, procedures, and overall working of the asset management company. Without the trustees' approval, AMC cannot float any scheme in the market. The trustees have to report to SEBI every six months about the activities of the AMC.

- C. Asset Management Companies-** Asset Management Companies are the third layer in the structure of Mutual Funds. The asset management company acts as the fund manager or as an investment manager for the trust. A small fee is paid to the AMC for managing the fund. The AMC is responsible for all the fund-related activities. It initiates various schemes and launches the same. The AMC is bound to manage funds and provide services to the investor. It solicits these services with other elements like brokers, auditors, bankers, registrars, lawyers, etc. and works with them. To ensure that there is no conflict between the AMCs, there are certain restrictions imposed on the business activities of the companies.

Other Components in the Structure of Mutual Funds are:

Custodian- A custodian is responsible for the safekeeping of the securities of the Mutual Fund. They manage the investment account of the Mutual Fund, ensure the delivery and transfer of the securities. They also collect and track the dividends & interests received on the Mutual Fund investment.

Registrar and Transfer Agents (RTAS)- These are the entities who provide services to Mutual Funds. RTAs are more like the operational arm of Mutual Funds. Since the operations of all Mutual Fund companies are similar, it is economical in scale and cost effective for all the 44 AMCs to seek the services of RTAs. CAMS, Karvy, Sundaram, Principal, Templeton, etc are some of the well-known RTAs in India. Their services include:

- i. Processing investors' application
- ii. Keeping a record of investors' details
- iii. Sending out account statements to the investors
- iv. Sending out periodic reports
- v. Processing the payouts of the dividends
- vi. Updating the investor details i.e. adding new members and removing those who have withdrawn from the fund.

Auditor- Auditors audit and scrutinise record books of accounts and annual reports of various schemes. Each AMC hires an independent auditor to analyse the books so as to keep their transparency and integrity intact.

Brokers- AMC uses the services of brokers to buy and sell securities on the stock market. The AMCs uses research reports and recommendations from many brokers to plan their market moves. The three-tier structure of the Mutual Funds is in place keeping the fiduciary nature of the Mutual Funds in mind. It ensures that each element of the system works independently and efficiently. This structure of Mutual Funds is in line with the international standards and thus there is a proper separation of responsibilities and functioning of each constituent of the structure.

18.7 TYPES OF MUTUAL FUND SCHEMES

The Mutual Funds offer a wide variety of schemes to the investors according to the objectives of the scheme, appetite of the investors, extent of diversification, financial position, risk tolerance and returns expectations. The following broad types of schemes are offered by the Mutual Funds:-

BROAD TYPE	MAJOR FEATURES
By Structure:	
Open-ended schemes	Schemes open throughout the year. Sale and repurchase of units on a daily basis at NAV
Close-ended schemes	Schemes open for subscription for a specific period only. Repurchase permitted at NAV, after the lock in period, if any
Interval schemes	Schemes that combine the features of open ended and close-ended schemes, making the fund open for sale or redemption during predetermined intervals.
By Investment Objective:	
Growth schemes	Aim is to achieve capital appreciation by investing in equity shares of companies that are experiencing significant earnings or revenue growth. In general, growth funds are more volatile than other types of funds.
Income schemes	Schemes that primarily concentrate on investment in bonds with an objective of earning regular income and providing regular dividend to the investors
Balanced schemes	Schemes use a combination of strategies, typically including some level of investment in bonds, to stay more conservative when it comes to risk and also invest in equity shares to aim for some growth.
Money market schemes	Schemes that invest in short term money market instruments, entail the least risk, as well as lower rates of return. Money market units are liquid and redeemable at any time. These schemes exclusively invest in money market instruments.

	<p>These funds are open ended, transacting in short term debt instruments, like Treasury Bills, Government Securities, call money, commercial paper, certificate of deposits. The investment in such securities is for a shorter tenure, so volume of investment is big.</p> <p>Such funds serve two important purposes:-</p> <ol style="list-style-type: none"> 1. Providing access of money market benefits to ordinary investors. 2. Acting as a balancing instrument for stabilizing volatile interest rates. <p>The emergence and working of MMMF is linked with the features of macro-economic environment in a country. Where interest rates are on higher sides with wide fluctuations, such mutual funds are suitable alternative. The average portfolio of money market funds is only in highly liquid securities. A minimum lock in period is prescribed. The NAV is calculated on the basis of market price of money market instruments.</p>
Other Schemes:	
Tax saving schemes	<p>Schemes that offer to the investors rebates in taxes under the Income Tax Act 1961. Usually have a three year lock in period. The fund manager of the Tax Saving Funds in India invests the money in instruments that are related to equity. The dividends of Tax Saving schemes in India are tax free.</p>
Index funds	<p>Funds which maintain investments in companies that are part of major stock indices, such as the BSE or NSE. The assets of an index fund are managed, to closely approximate the performance of a particular published index. An index fund manager makes fewer trades and thus the funds generally have lower trading expenses.</p>
Sector specific schemes	<p>Schemes that invest solely in companies that operate in a particular industry or sector of the economy. Because the holdings of this type of scheme are in the same industry, there is an inherent lack of diversification associated with these schemes.</p>

Gilt edged schemes	Schemes which invest their pooled money in Government securities and generally provide a fixed rate of return.
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18.8 CLASSIFICATION OF MUTUAL FUNDS

Mutual funds are classified on various basis such as functional basis, geographical basis, and portfolio basis and on miscellaneous basis which are discussed as follows: 4.1 Functional classification of mutual fund On functional basis mutual funds are classified into open ended , close ended and interval schemes or funds

- A. Open ended mutual fund schemes-** An open ended mutual fund is one that continuously offers to sell and repurchase its units at net assets value. The maturity period of these schemes are not specified. An investor can buy or sell units at NAV which are declared on a daily basis. Thus these funds provide investors a freedom to enter and exit from the scheme at any time during the life of the fund. Since these schemes have perpetual succession and flexible corpus, these schemes provide instant liquidity to the investors. Unlike close ended schemes, these schemes do not have to be listed on the stock exchange rather they are transacted by the mutual fund themselves. The fluctuation in stock price causes the purchase price and sales price of these funds to change daily. Therefore when there is bearish in the stock market, the NAV of these schemes decreases and the transactions of buying and selling can be done at low price and vice versa. The corpus of these schemes are not fixed and goes on increasing or decreasing depending upon the redemption and purchase of the units by the investors.
- B. Close ended mutual fund schemes-** Close ended mutual fund schemes have a fixed corpus, stipulated maturity period and a specified subscription period. They are like any other company operating in an industry. The investors are allowed to investor in close ended schemes, when it is launched and that too up to the specified date. Once the initial subscription is over, the units of these schemes are listed on the stock exchange. As the units are listed on the stock exchange it provides liquidity to the investors. The shares of close ended schemes are often sells at discount because from the point of view of the investor's close ended schemes are more risky as compared to the open ended schemes. It is worthwhile for an investor to make investment in close ended scheme only when the discount is very high.
- C. Interval schemes-** A scheme that combines the features of both the open ended and close ended schemes is called the interval scheme. In this scheme there is predetermined intervals during which the sale or redemption of units are open at the NAV related prices

18.9 PERFORMANCE MEASUREMENT AND EVALUATION OF MUTUAL FUND SCHEMES

The mutual fund investments are considered to be less risky investment avenues as compared to direct investments in stock markets. All mutual fund schemes provide market related returns. The performance of mutual funds can be evaluated with resources mobilized by mutual funds over a period, net inflow or outflow of funds and trading of mutual fund units in the market.

18.9.1 NET ASSET VALUE (NAV) OF A SCHEME

The performance of a particular scheme of a mutual fund is denoted by the Net Asset Value (NAV). The mutual funds invest the money collected from the investors in securities markets. In simple words, Net Asset Value is the market value of the securities held by the scheme. Since the market value of securities changes every day, NAV of a scheme also varies on day to day basis. The NAV per unit is the market value of securities of a scheme divided by the total number of units of the scheme on any particular date. For example, if the market value of securities of a mutual fund scheme is Rs 200 lakhs and the mutual fund has issued 10 lakhs units of Rs. 10 each to the investors, then the NAV per unit of the fund is Rs.20. The NAV is required to be disclosed by the mutual funds on a regular basis - daily or weekly - depending on the type of scheme.

NAV of a mutual fund unit is calculated as:

NAV=

$$\frac{\text{Market value of investments} + \text{Receivables} + \text{other accrued Income} + \text{Other Assets} - \text{Accrued expenses} - \text{other payables} - \text{other liabilities}}{\text{No.of units outstanding as on NAV date}}$$

The NAV is calculated once in a day by marking the balance sheet of the scheme to the market. First, the total market value of all the stocks held is computed. The total of the market value is added to the scheme's cash and equivalent holdings. The Liabilities (including accrued expenses) are subtracted. The result is total net assets. Dividing the total assets by the number of units outstanding, give the NAV per unit.

The proper performance measurement of mutual fund schemes involve recognition of both, the return and the riskiness of the investments. The central issue in performance measurement is both a measurement of risk with return. Benchmarking and peer group analysis of mutual fund schemes help the investors to understand the performance in more meaningful terms. The investors should monitor the performance of their mutual fund schemes on a regular basis.

18.9.2 THE CONCEPT OF RETURN

The performance in the context of the mutual funds, is to compare the expected return with the actual return. Therefore, the performance measurement exercise needs to begin by carefully understanding the objectives of the fund and

then comparing the actual performance against these objectives. The most vital statistic in measuring the performance of a mutual fund is the rate of return.

18.9.3 THE CONCEPT OF RISK

The risk is the key dimension of the performance measurement and a decisive factor in determining a fund manager's skills. One cannot make a judgment about how skilful a fund manager is in a particular period by looking at return only. Market value of investments + Receivables + other accrued Income + Other Assets - Accrued expenses - other payables - other liabilities No. of units outstanding as on NAV date NAV= 68 Risk in a generic sense is the possibility of loss, damage, or harm. For investment purposes a more specific definition of risk has to be given. It refers to variability in the expected return.

For a mutual fund, the following factors cause variability of the investment performance:

- The kind of securities in the portfolio. e.g., small cap stocks may be more volatile than large cap stocks.
- The degree of diversification. e.g., a portfolio of only 5 stocks may be more volatile than a portfolio comprising of 15 stocks.
- The extent to which the portfolio manager times the market. e.g., an 'index fund tends to be less volatile than an aggressive growth fund.

18.9.4 STANDARD DEVIATION

Standard deviation is a measure of dispersion in return. It quantifies the degree to which returns fluctuate around their average. A higher value of standard deviation means higher risk. The standard deviation is used probably more than any other measure to describe the risk of a security (or portfolio of securities). It's not just a financial tool though.

Standard Deviation for Mutual Funds- When used to measure the volatility of the performance of a security or a portfolio of securities, standard deviation is generally calculated for monthly returns over a specific time period usually, 36 months. And, because most people think about returns on an annual and not on monthly basis, the resulting number is then modified to produce an annualized standard deviation. Though standard deviation measures volatility on both the upside and the downside, it's a good proxy for measuring the risk of loss with any security. One of the strengths of standard deviation is that it can be used across the board for any type of portfolio with any type of security. The calculation is the same for a portfolio of bonds as it is for a portfolio of growth stocks.

18.9.5 PERFORMANCE EVALUATION

After measuring the performance, next important step is to evaluate it against some suitable benchmark to address more important issues like how the reassured return measures up to the similar investment opportunities. Performance

evaluation will also enable the fund's sponsor and the asset management committee to determine if the fund manager has enhanced the fund's value beyond what could be obtained from a passive indexed strategy. The performance evaluation involves benchmarking and peer group analysis.

18.10 DIFFERENCE BETWEEN PUBLIC AND PRIVATE MUTUAL FUND IN INDIA

A mutual fund is an investment instrument which takes funds from many different kinds of investors to invest in stocks, bonds, money market instruments and other financial assets. Mutual funds can be either public or private. Both types of mutual funds have their own intricacies and benefits.

Public Mutual Funds- Public mutual funds, as their name suggests, are open to the public to invest in. They are managed by professional fund managers, who actively invest in various securities to achieve the mutual funds' stated objectives, which could be capital growth or income.

Private Mutual Funds- Private mutual funds are an exclusive investment with a limited number of investors. The minimal investment for a share of a private mutual fund is much higher than that of a public mutual fund. Depending upon the number of investors in a private mutual fund, there is little or no government regulation.

Points of Difference:

1. Public mutual funds are open to public whereas in private mutual funds only few investors can participate.
2. Comparatively, there is less governmental regulation in private mutual fund than public mutual fund.
3. Private funds are prone to greater investment risks than public mutual funds
4. Public mutual funds comparatively cater larger number of investors than private mutual funds.

In general, it has been seen that investors feel safer with public mutual funds than private mutual funds.

18.11 ADVANTAGES OF INVESTING IN MUTUAL FUNDS

The investment in Mutual funds have several benefits, including:

1. **Professional Money Management-** The Professional fund managers have the qualifications, training and experience to manage investments effectively. Investing in mutual funds has the benefit of the expertise of professionals who have the resources to thoroughly research potential investments, churn the portfolio and balance the risk-return trade-off.

They monitor the market and the economic trends and then take a conscious investment decision on the basis of their analysis.

2. **Risk Diversification-** Diversification is a key to intelligent investing. Because of the economies of scale provided by mutual funds, even a small investment is diversified. When the money is invested in a mutual fund, the holding always represents an array of shares, bonds and/or other investments and this diversified investment portfolio helps in reducing the level of risks.
3. **Flexibility-** The Mutual funds are considered as flexible investments as the investor has a variety of plans to choose from - income or growth plan, dividend or re-investment plan, Systematic Investment Plan or Systematic Withdrawal Plan, Children Benefit Plan or Tax Saving Plan . They offer multiple schemes / options to allow investors to switch easily between various schemes. This flexibility gives the investor a convenient way to change the mix of his portfolio over time, quite easily as compared to changing shares portfolio.
4. **Convenience-** The investments in Mutual funds are simple to buy and sell. When one buys mutual funds, one gains the benefit of diversification without having to research and track numerous individual investments. They give detailed reports to review mutual funds' performance through the quarterly disclosure reports. The facilities of periodic purchase/ withdrawals and re-investment are available to investors. Each investor is issued units electronically, receives an account statement which is non transferable. Hence, he does not have to worry about theft of the physical certificates or loss in transit.
5. **Long-Term Growth-** The Mutual funds have more long term growth potential than short term investment vehicles such as savings accounts and money market funds.
6. **Reduction in Costs-** The Mutual funds have a large pool of money that they have to invest. So they are often involved in buying and selling of large amounts of securities that will cost much lower than when we invest on our own. The fund expenses are often no more than 1.5% of the investment expenses. For Index Funds the expenses are less than that, because index funds are not actively managed. Instead, they automatically buy stock in companies that are listed on a specific index like BSE.
7. **Liquidity-** A mutual fund investor can sell off the investments and get the current market value of the investments based on NAV. in a short time. With open-ended mutual funds, one can 63 redeem all or part of the units any time. Such liquidity makes mutual funds much more attractive than illiquid instruments such as fixed deposits and bonds.
8. **Transparency-** The Mutual funds are very transparent. All mutual fund schemes disclose their NAV daily and full portfolio quarterly. They give detailed information about investments, the proportion in which the investments have been made in different asset categories, fund manager's

investment strategy and objective of the scheme. This level of transparency where the investor himself sees the underlying assets bought with his money, is unmatched by any other financial instrument.

9. **Well Regulated-** The Securities and Exchange Board of India (SEBI), the mutual fund's regulator has clearly defined rules which govern all mutual funds in India. These regulations relate to the formation, administration and management of mutual funds and also prescribe disclosure and accounting requirements. Such a high level of regulation seeks to protect the investors from misuse of their money. This regulatory control and check are not available in such detail in case of other investments.
10. **Choice of Schemes-** The Mutual funds investment offer a tremendous variety of schemes. It is beneficial in two ways: first, it offers different types of schemes to investors with different needs and risk appetites; secondly, it offers a chance to an investor to invest sums across a variety of schemes, both debt and equity.
11. **Advanced Portfolio Management-** When you buy a mutual fund, you pay a management fee as part of your expense ratio, which is used to hire a professional portfolio manager who buys and sells stocks, bonds, etc.

This is a relatively small price to pay for getting professional help in the management of an investment portfolio.
12. **Dividend Reinvestment-** As dividends and other interest income sources are declared for the fund, it can be used to purchase additional shares in the mutual fund, therefore helping your investment grow.

18.12 DRAWBACKS OF MUTUAL FUNDS

Akin to most investments, mutual funds offer both advantages and disadvantages, which should be analyzed before you choose to buy one. The Mutual fund investments have their own following drawbacks, however may not be for everyone:

1. **No Guarantees-** In the mutual fund investment, no investment is risk free. If the stock market falls, the value of mutual fund units go down as well, no matter how balanced the portfolio is. Anyone who invests through a mutual fund runs the risk of losing money.
2. **Fees and Commissions-** All mutual funds charge administrative fee to cover their day-to-day expenses. Some funds also charge sales commissions or "loads" to compensate the brokers, financial consultant, or financial planners. Even if one doesn't use a broker or other financial adviser one will pay a sales commission if one buys units in a Load fund.
3. **Management Risk-** When one invests in a mutual fund one depends on the fund manager to make the right decisions regarding the fund's portfolio. If the manager does not perform as well as we had hoped, we might not make as much money on our investments as expected. Of

course, if we invest in Index Funds, we forego management risk because these funds are passively managed.

4. **Fluctuating returns-** Mutual funds do not offer fixed guaranteed returns in that you should always be prepared for any eventuality including depreciation in the value of your mutual fund. In other words, mutual funds entail a wide range of price fluctuations. Professional management of a fund by a team of experts does not insulate you from bad performance of your fund.
5. **No Control-** All types of mutual funds are managed by fund managers. In many cases, the fund manager may be supported by a team of analysts. Consequently, as an investor, you do not have any control over your investment. All major decisions concerning your fund are taken by your fund manager. However, you can examine some important parameters such as disclosure norms, corpus and overall investment strategy followed by an Asset Management Company (AMC).
6. **Diversification-** Diversification is often cited as one of the main advantages of a mutual fund. However, there is always the risk of over diversification, which may increase the operating cost of a fund, demands greater due diligence and dilutes the relative advantages of diversification.
7. **Fund Evaluation-** Many investors may find it difficult to extensively research and evaluate the value of different funds. A mutual fund's net asset value (NAV) provides investors the value of a fund's portfolio. However, investors have to study various parameters such as sharpe ratio and standard deviation among others to ascertain how one fund has fared compared to another which can be complicated to some extent.
8. **Past performance-** Ratings and advertisements issued by companies are only an indicator of the past performance of a fund. It is important to note that robust past performance of a fund is not a guarantee of a similar performance in the future. As an investor, you should analyse the investment philosophy, transparency, ethics, compliance and overall performance of a fund house across different phases in the market over a period of time. Ratings can be taken as a reference point.
9. **Costs-** The value of a mutual fund may fluctuate depending on the changing market conditions. Furthermore, there are fees and expenses involved towards professional management of a mutual fund which is not the case for buying stocks or securities directly in the market. There is an entry load which has to be borne by an investor when buying a mutual fund. Furthermore, some companies charge an exit cost as well when an investor chooses to exit from a mutual fund.
10. **CAGR-** The performance of a mutual fund vis-a-vis the compounded annualised growth rate (CAGR) neither provides investors adequate information about the amount of risk facing a mutual fund nor the process of investment involved. It is therefore, only one of the indicators to gauge the performance of a fund but is far from being comprehensive.

11. **Fund managers-** According to experts, as an investor, you would do well not to be carried away by the so-called ‘star fund managers’. Even a highly skilled manager can make a positive difference in the short-term but cannot dramatically change the performance of a fund in the long-term. Also, there is always the likelihood of a star fund manager joining another company. It is, therefore, more prudent to examine the processes which are followed by a fund house rather than the star appeal of just one individual.

18.13 THE GROWTH AND PERFORMANCE OF MUTUAL FUNDS IN INDIA

The concept of mutual fund in India started in 1964 with the setting up of Unit Trust of India (UTI). The growth and performance of mutual funds in India can be divided in four phases:

Phase-I: 1964-1987- During this phase, UTI enjoyed monopoly of being the only mutual fund in India. The first scheme launched by the UTI was US-64 which gained a lot of popularity. Later on, the UTI launched other schemes like Unit Linked Insurance plan etc. Later on UTI diversified its business in banking, securities trading, investor servicing etc. by setting up associates companies.

Phase-II: 1987-1993- During this second phase, other players such as SBI, LIC, Canara Bank entered in the mutual fund market. This period experienced a lot of competition and improvement in terms and conditions to the investors in mutual funds in India.

Phase-III: 1993-1996- This phase witnessed the increased competition in the mutual fund market with the entry of private sector and foreign mutual funds in the industry. Then the SEBI came out with mutual fund regulations during this phase to ensure safety of investors money and smooth functioning of the mutual fund industry in India.

Phase-IV: 1996 onwards- During this phase SEBI felt the need for modifying the regulation issued in 1996. It circulated a consultative paper “mutual fund-2000” to make amendments. The content of the paper was deliberated among all the players in the mutual fund market and a new set of SEBI Regulation, 1996 was released to bring private sector mutual funds at par with public sector mutual funds.

In the beginning the UTI enjoyed the total monopoly in the mutual funds industry. Gradually between 1987 and 1992, mutual funds were set up by nationalized banks and insurance companies. In 1992, the government allowed the setting up of mutual funds by the private and joint sectors. In short the industry has moved from a complete monopoly to that of a monopolistic competition.

The investor's increasing interest in the mutual funds is because to the fact that while the investor is blessed with little or no knowledge about capital market whereas the asset management company is equipped with economic and financial experts to manage the pooled resources. Also a single small investor would not be

able to invest his money wisely in diversified securities. Around 60 to 70 per cent of middle class households in India invest in mutual funds units.

In India, there has been a gradual increase in the share of mutual funds. Since 1988-89 mutual funds Gross savings of the household sector. The financial assets has increased from Rs 12.1 18 crore in 1980-81 to Rs 1, 35,348 crore in 1994-95. The banking sector role has declined relatively. The most marketable growth was seen during 1980-81 to 1992-93 when units of UTI increased from 0 3 per cent of the total household savings in 1980-81 to 70 per cent in 1992-93. However this increase was slowed down later but is still growing. The amounts of deposits in banks are falling from previous years on proportionate basis. Investors now look mutual funds as an alternative option to put their savings into.

18.13.1 EVOLUTION AND CONTRIBUTION IN THE FORM OF ASSOCIATES AND PROMOTIONAL INSTITUTIONS TO THE INDUSTRIAL GROWTH OF ECONOMY BY THE UTI

Mutual fund is an instrument for pooling the resources from various investors in small quantities by issuing units to the investors and investing the large amount of fund so formed by these small contributions indifferent kinds of securities and debentures in accordance with objectives as make known in offer document. Here investments are made in diversified assets and securities of various sectors of industries. This diversification helps in reducing the risk of a particular investment. . Investors of mutual funds are known as unit holders. The profits or losses are shared by the investors in proportion to their investments. All mutual funds are regulated by SEBI.

18.14 SUMMARY

Mutual funds are therefore great instrument of investing for those investors who have little money to invest and also little knowledge of finance. These funds help the investors to park their money in a professional manner by seeking advice of experts from Asset Management Company. The growth of mutual funds can be seen from increasing number of investors in this sector. Mutual funds are a great means of investing for investors of different needs. There are various kinds of schemes and plans that are offered by mutual fund companies for the benefit of investors.

18.15 TEST YOUR PROGRESS

1. Explain the significance of Mutual Funds
2. What are the features of Mutual Funds
3. Describe the Working of Mutual Funds
4. Explain the Structure of Mutual Funds In India

5. What are various types of Mutual Funds Schemes
6. Explain the Classification of Mutual Funds
7. Differentiate between Performance Measurement and Evaluation of Mutual Fund Schemes
8. Differentiate between Public And Private Mutual Funds In India
9. What are the advantages Of Investing In Mutual Funds

18.16 SUGGESTED READINGS

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UNIT-19 FOREIGN CAPITAL AS A SOURCE OF FINANCE

UNIT STRUCTURE

- 19.0 Objectives
- 19.1 Introduction
- 19.2 Foreign Capital
- 19.3 Need For Foreign Capital
- 19.4 Types Of Foreign Capital
- 19.5 Summary
- 19.6 Test Your Progress
- 19.7 Suggested Readings

19.0 OBJECTIVES

After studying this unit the student would be able to understand:

- The other sources of raising funds in the primary capital market i.e., through international capital market.
- Meaning and the characteristics of GDRs
- Meaning and the characteristics of ADRs
- Factors leading to an increase in the popularity of international market for raising the finances
- Would also understand ECB & FCCB

19.1 INTRODUCTION

In the post globalization era, it is really difficult for a corporation to grow and foster in a highly competitive volatile market scenario, when the domestic capital in supply is limited. In most of the emerging economy capital is a major constrain for growth of an organization. But capital is no more an obstacle for business to grow after the integration of domestic market with world market with rapid liberalization in the directions of transfer of capital, manpower, technology, expertise, intellectual properties rights, know how techniques, etc. among the economies. If an economy has growth potential and business environment, it could attract huge amount of foreign capital. The foreign investors like any other investor expect better returns from their investment and if the host economy has the potential to provide better returns, capital would flow in. In addition to the

investment returns, the host economy needs to have sound law and regulations to ensure the confidence of foreign investor in the domestic economy.

19.2 FOREIGN CAPITAL

As the name suggests the term foreign capital is a non-domestic source of financing for an organization or government. Foreign capital is a crucial precipitating factor for growth of an undertaking in an emerging economy where domestic capital in supply is normally limited. Countries like India, China, Brazil and some other emerging economies frame liberal policies to attract foreign investors to invest in their economy with the expectation of growth, employment and development in the host economy.

Everywhere in the world, including the developed countries, governments are vying with each other to attract foreign capital. The belief that foreign capital plays a constructive role in a country's economic development, it has become even stronger since mid-1980.

The experience of South East Asian Countries (1986-1995) has especially confirmed this belief and has led to a progressive reduction in regulations and restraints that could have inhibited the inflow of foreign capital.

19.3 NEED FOR FOREIGN CAPITAL

The need for foreign capital arises because of the following reasons. In most developing countries like India, domestic capital is inadequate for the purpose of economic growth. Foreign capital is typically seen as a way of filling in gaps between the domestically available supplies of savings, foreign exchange, government revenue and the planned investment necessary to achieve developmental targets. To give an example of this 'savings-investment' gap, let us suppose that planned rate of growth output per annum is 7 percent and the capital-output ratio is 3 percent, then the rate of saving required is 21 percent.

If the saving that can be domestically mobilized is 16 percent, there is a shortfall or a savings gap of 5 percent. Thus the foremost contribution of foreign capital to national development is its role in filling the resource gap between targeted investment and locally mobilized savings. Foreign capital is needed to fill the gap between the targeted foreign exchange requirements and those derived from net export earnings plus net public foreign aid. This is generally called the foreign exchange or trade gap.

An inflow of private foreign capital helps in removing deficit in the balance of payments over time if the foreign-owned enterprise can generate a net positive flow of export earnings.

The third gap that the foreign capital and specifically, foreign investment helps to fill is that between governmental tax revenue and the locally raised taxes. By taxing the profits of the foreign enterprises the governments of developing countries are able to mobilize funds for projects (like energy, infrastructure) that are badly needed for economic development.

Foreign investment meets the gap in management, entrepreneurship, technology and skill. The package of these much-needed resources is transferred to the local country through training programmes and the process of learning by doing'. Further foreign companies bring with them sophisticated technological knowledge about production processes while transferring modern machinery equipment to the capital-poor developing countries.

In fact, in this era of globalization, there is a great belief that foreign capital transforms the productive structures of the developing economics leading to high rates of growth. Besides the above, foreign capital, by creating new productive assets, contributes to the generation of employment a prime need of a country like India.

19.4 TYPES OF FOREIGN CAPITAL

Let us look at what are the major sources of foreign capitals and how are they different from each other. The following are the major foreign capitals:

1. Foreign Direct Investment (FDI)
2. Foreign Port-folio Investors (FPI) or Foreign Institutional Investors (FII)
3. External Commercial Borrowing (ECB)
4. Euro Issue
 - i. American Depository Receipts (ADR)
 - ii. Global Depository Receipts (GDR)
 - iii. Foreign Currency Convertible Bonds (FCCB)
 - iv. Foreign Currency Exchangeable Bonds ((FCEB)
5. Foreign Venture Capital Investor
6. Borrowing from International Monetary Institutions
7. Foreign Aid (Loan or Grant)

19.4.1 FOREIGN DIRECT INVESTMENTS (FDI)

FDI is the investment made by an entity of an economy other than its national economy, into an entity of a foreign nation where it wants to have substantial influence and control over the entity. For example POSCO steel conglomerate of South Korea wanted to invest in the state of Odisha (India) by opening a subsidiary in the name of POSCO India. POSCO would be the major shareholder of the company and it would have substantial influence over the management, control and decision making in the subsidiary. In this scenario India would be the host country which would receive the FDI (inward FDI). When TATA Group acquired Jaguar & Land Rover from Ford in UK the money was transferred from the domestic economy India to foreign economy UK (outward

FDI). FDI is a major component global integration these days, trans-border transfer of capital is no more an uncommon phenomenon to the globalized open economies. Increase in the number of many large MNCs and conglomerates are the result of FDI, through expansion, growth and diversification of corporates in the foreign lands other than the place of origin. Unlike the indirect port-folio investment, which mostly invest in the securities listed in the stock exchanges in the secondary market, FDI is a direct investment in the company where the investing entity would have significant degree of influence. There are two broad way of FDI investment one is Greenfield Investment where the investing entity set up a new subsidiary company in the foreign land (example-POSCO's investment in INDIA) and other one is Brownfield Investment where the investing entity either acquire, enter into joint venture or merge with the foreign company/entity (example- TATA Group acquired Jaguar Land Rover from Ford Motors). Normally an open economy with strong growth potential, material resources, skilled cheap labour force and better regulation in place attract more FDI. FDI fill the gap between the saving and investment in the economy. Let say an economy has much more growth potential than its current operating level but the investment needed to capitalize this growth, could not be met from the deficit domestic capital in supply (Saving). This gap could be filled by the FDI hence FDI is major source of foreign capital for emerging economy where mostly saving is less to the investment needs.

A foreign investor can invest in an Indian business through the following means:

1. Acquiring voting stock in a foreign company
2. Mergers and acquisitions
3. Joint ventures with foreign corporations
4. Starting a subsidiary of a domestic firm in a foreign country

19.4.1.1 SIGNIFICANCE OF FDI

Foreign direct investment is when an investor living in one country invests in a business based in another country. Under FDI, the foreign investor (individual or business) owns 10 per cent of the company where the investment is being made. If the investor owns less than 10 per cent, the International Monetary Fund (IMF) defines it as part of his or her stock portfolio.

A 10 per cent ownership is a safe bet because it does not give the investor a controlling interest but it does allow influence over the company's management, operations, and policies. This ensures the investor to develop a lasting interest in the business and hence we can conclude that FDI is not merely the transfer of funds. It is differentiated in this regard from foreign portfolio investment.

Foreign direct investment is significant for developing economies and emerging markets where companies need funding and expertise to expand their international sales. Private investment in infrastructure, energy, and water is a critical driver of the economy as helps in increasing jobs and wages.

19.4.1.2 FEATURES OF FDI

1. It is commonly made in open economies that offer a skilled workforce and good growth prospects for the investors in comparison to tightly regulated economies.
2. It involves a long term commitment as there is no intention to seek quick capital gains.
3. As per organization for economic cooperation & development (OECD), investment of 10% or above from overseas is considered as FDI.
4. Foreign direct investment not only requires capital investment but also requires management as well as technology.
5. It increases the productive capacity of the target company as it involves creation of physical assets. This helps in generating employment opportunities and fast economic growth in the host country.
6. It establishes an effective control in the company in which the investment is made.
7. Investing company has a major influence on the decision making process of the company in which the investment is made.

19.4.1.3 TYPES OF FDI

When a company invests in another company in a foreign land, the investment is said to be a foreign direct investment (FDI). The FDIs are further categorised into four types.

The investment market is an enormous space. Individual investors and large companies can invest in companies within their countries as well as overseas. When one company invests in a business in another company in a foreign land, the investment is deemed as foreign direct investment or FDI. There are four different types of foreign direct investments. They are as under:

1. **Horizontal FDI-** The most common type of FDI is Horizontal FDI, which primarily revolves around investing funds in a foreign company belonging to the same industry as that owned or operated by the FDI investor. Here, a company invests in another company located in a different country, wherein both the companies are producing similar goods. For example, the Spain-based company Zara may invest in or purchase the Indian company Fab India, which also produces similar products as Zara does. Since both the companies belong to the same industry of merchandise and apparel, the FDI is classified as horizontal FDI.
2. **Vertical FDI-** Vertical FDI is another type of foreign investment. A vertical FDI occurs when an investment is made within a typical supply chain in a company, which may or may not necessarily belong to the same industry. As such, when vertical FDI happens, a business invests in an overseas firm which may supply or sell products. Vertical FDIs are further categorised as backward vertical integrations and forward vertical

integrations. For instance, the Swiss Coffee producer Nescafe may invest in coffee plantations in countries such as Brazil, Columbia, Vietnam, etc. Since the investing firm purchases, a supplier in the supply chain, this type of FDI is known as backward vertical integration. Conversely, forward vertical integration is said to occur when a company invests in another foreign company which is ranked higher in the supply chain, for instance, a coffee company in India may wish to invest in a French grocery brand.

3. **Conglomerate FDI-** When investments are made in two completely different companies of entirely different industries, the transaction is known as conglomerate FDI. As such, the FDI is not linked directly to the investors business. For instance, the US retailer Walmart may invest in TATA Motors, the Indian automobile manufacturer.
4. **Platform FDI-** The last types of foreign direct investment is platform FDI. In the case of platform FDI, a business expands into a foreign country, but the products manufactured are exported to another, third country. For instance, the French perfume brand Chanel set up a manufacturing plant in the USA and export products to other countries in America, Asia, and other parts of Europe.

If you intend to invest via FDI, you must know about the different types of FDI with examples. With FDI, the money invested can be used to start a new business in a foreign country or to invest in an already existing business in a foreign country. For more information on FDIs, consult Angel Broking advisors.

19.4.1.4 ADVANTAGES OF FDI

There are many ways in which FDI benefits the recipient nation:

1. **Increased Employment and Economic Growth-** Creation of jobs is the most obvious advantage of FDI. It is also one of the most important reasons why a nation, especially a developing one, looks to attract FDI. Increased FDI boosts the manufacturing as well as the services sector. This in turn creates jobs, and helps reduce unemployment among the educated youth - as well as skilled and unskilled labour - in the country. Increased employment translates to increased incomes, and equips the population with enhanced buying power. This boosts the economy of the country.
2. **Human Resource Development-** This is one of the less obvious advantages of FDI. Hence, it is often understated. Human Capital refers to the knowledge and competence of the workforce. Skills gained and enhanced through training and experience boost the education and human capital quotient of the country. Once developed, human capital is mobile. It can train human resources in other companies, thereby creating a ripple effect.
3. **Development of Backward Areas-** This is one of the most crucial benefits of FDI for a developing country. FDI enables the transformation of backward areas in a country into industrial centres. This

in turn provides a boost to the social economy of the area. The Hyundai unit at Sriperumbudur, Tamil Nadu in India exemplifies this process.

4. **Provision of Finance & Technology-** Recipient businesses get access to latest financing tools, technologies and operational practices from across the world. Over time, the introduction of newer, enhanced technologies and processes results in their diffusion into the local economy, resulting in enhanced efficiency and effectiveness of the industry.
5. **Increase in Exports-** Not all goods produced through FDI are meant for domestic consumption. Many of these products have global markets. The creation of 100% Export Oriented Units and Economic Zones have further assisted FDI investors in boosting their exports from other countries.
6. **Exchange Rate Stability-** The constant flow of FDI into a country translates into a continuous flow of foreign exchange. This helps the country's Central Bank maintain a comfortable reserve of foreign exchange. This in turn ensures stable exchange rates.
7. **Stimulation of Economic Development-** This is another very important advantage of FDI. FDI is a source of external capital and higher revenues for a country. When factories are constructed, at least some local labour, materials and equipment are utilised. Once the construction is complete, the factory will employ some local employees and further use local materials and services. The people who are employed by such factories thus have more money to spend. This creates more jobs. These factories will also create additional tax revenue for the Government, that can be infused into creating and improving physical and financial infrastructure.
8. **Improved Capital Flow-** Inflow of capital is particularly beneficial for countries with limited domestic resources, as well as for nations with restricted opportunities to raise funds in global capital markets.
9. **Creation of a Competitive Market-** By facilitating the entry of foreign organisations into the domestic marketplace, FDI helps create a competitive environment, as well as break domestic monopolies. A healthy competitive environment pushes firms to continuously enhance their processes and product offerings, thereby fostering innovation. Consumers also gain access to a wider range of competitively priced products.

For a multinational corporation, FDI in India is a means to access new consumption and production markets, and thereby expand its influence and business operations. It can gain access not only to limited resources such as fossil fuels and precious metals, but also skilled and unskilled labour, management expertise and technologies. FDI also enables an organisation to lower its cost of production- by accessing cheaper resources, or going directly to the source of raw materials rather than buying them from third parties. Often, there are various tax advantages that accrue to a company undertaking FDI. This can occur when the home country allows tax deduction on foreign income, or when the recipient country allows tax deductions and benefits for organisations incurring FDI in that

country. Additionally, this can happen when the recipient country has a more beneficial tax code than the home country.

Today, India has become one of the most attractive destinations for foreign direct investments thanks to liberalised norms, easy policies and subsidised rates. Foreign investors are also willing to invest in the country due to lower labour costs, market diversification, subsidies, and preferential tariffs.

19.4.1.5 DISADVANTAGES OF FDI

The free flow of private foreign capital is not in the best interests of the developing countries. Most of the developing countries have adopted the technique of planned development and direct foreign investments have no place in the planned economy.

Strongly condemning the private foreign capital in economy, Dr. H.W. Singer has stated, “It did little or nothing to promote and on occasion, may even have impeded the economic development of the debtor countries”.

He further observes that in the past it has not done much the spread industrial development of the backward agricultural countries but has concentrated mainly on primary production for export to advanced countries. In addition to this private foreign investments have positive disadvantages for the underdeveloped countries. Thus there must be cautious use of this fund. However, disadvantages of Private Foreign Capital are highlighted.

Some of the major disadvantages of private foreign capital are as follows:

1. Distort of the Pattern of Development of the Economy:

It is not suitable for countries who have adopted a scheme of planned development, While deciding about the investment projects the foreign capitalists will be guided by the maximization of profit criteria and not the plan priorities of the country. In other words, it always invests in low priorities of the economy.

2. Adverse Effect on Domestic Savings:

This sort of investment should be expected to have an income effect which will lead to a higher level of domestic savings. But at the same moment if private foreign investment reduces profits in domestic industries, it will adversely affect the income of profit earning and further will tend to reduce domestic savings.

3. Adverse Effect on Balance of Payments of the Recipient Country:

Foreign investors may earn huge profits which are to be repatriated in due course of time. The repatriation of these profits may turn into serious imbalances in the balance of payments of the recipient nation.

4. Not Useful on Political Grounds:

Private foreign investment in under developed countries is feared not only for economic reasons but also on political grounds. There is a great fear that it may lead to loss of independence of the recipient country. In the opinion of Prof.

Lewis, “The loss of independence may be partial or complete; partial if the capitalists confine themselves to bribing politicians or backing one political group against another or complete if the debtor country is reduced to colonial status”.

These fears are quite widespread. They are mainly responsible for the reluctance on the part of developing countries to accept private foreign capital. In this connection Prof. WA. Lewis holds the view that, “These fears are one of the strongest reasons as to why the less developed countries are anxious that the United Nations should create adequate institutions for transferring capital so that they should not become dependent upon receiving capital from any one of the great powers”.

5. Limited Coverage:

Private capital usually restricts itself to certain limited spheres of economic life. For example, it chooses those industries where it can make large and quick profits, irrespective of the fact whether the development of those industries is in the development interest. Such industries are largely consumer goods industries or those industries in which the gestation period is not too long. It is for these reasons that in India before Independence, foreign capital mostly British, was directed to such industries as plantations, etc.

6. More Dependence:

The use of private capital often increases dependence on foreign sources. This happens at least on two counts. One is that the use of foreign technology appropriate to the resource-endowments of advanced countries does not permit the development of indigenous technology appropriate to the conditions of the recipient country.

On the contrary, it positively discourages the development of such a technology in competition with itself. This means the country in question will continue to depend upon the import of foreign technology. Two, the foreign technology used requires import of goods for replacement and maintenance, thereby creating balance of payments difficulties.

We have taken so much from the foreign technical know-how that we have not yet developed what may be described, as an appropriate technology suited to our resources and needs. Further, imports of replacement and maintenance goods are costing us a lot.

7. Restrictive Conditions:

In many cases foreign collaboration agreements contain restrictive clauses in respect of such things as exports. For example, foreign collaborators make investments to exploit the Indian market because they find it difficult to approach this market from outside.

But these collaborators do not want the Indian concern to export its goods to other countries which are already being supplied by the foreign collaborators from their concerns operating in other countries. Obviously, such agreements are of limited value for the country.

8. Remittance of Large Amounts:

Remittance of profits of course is a normal facility which the foreign investor expects. But often the profits earned in the early stages are high, involving big remittances. In many collaboration agreements, for example, the initial foreign capital is confined to the foreign exchange component of the project.

The rest of the resources are made available through internal sources. Since the rate of return on initial investment is usually very high, it makes it possible for the foreign collaborator to recover his amount in a relatively short time. Yet the payment on account of such things as technical services, royalty payments, etc., continues.

From the above cited discussion, it can easily be concluded that private foreign capital is not very safe for less developed countries, it does not fit into their planned development. Again it does not provide hope for their rapid industrialization and economic growth.

19.4.2 FOREIGN PORT-FOLIO INVESTMENT (FPI)

FPI are the foreign institutional or individual investors who invest in the security market other than the domestic security market, in different class of assets like bonds, debenture, equity etc.. For example pension funds, insurance funds, mutual funds, banks are the institutional investors registered in the USA make investment in the Indian domestic security market, then they would be treated as the foreign institutional investors investing in Port-folio of Indian securities. The FII are just like domestic institutional investors, the only difference is they are registered in the foreign lands and funds at their disposal are from the residents of foreign land. In Indian security market, foreign individual retail investor are not allowed to invest directly until now, if they want to invest they could come through the FIIs or Sub account under FIIs. Unlike FDI, FPI investors are not interested in the management and control in the company. They want return from the security market like any other investors. The FPI investments are relatively liquid and more volatile than the FDI investment. The FPI investors stay invested till the time they get returns, they withdraw money from the market if loss arises because they don't have long term interest in the company like FDI. We observed a severe withdrawal by the FPI in 2008-09 during US Financial Crisis, from Indian security market. Though FPI is a major source of finance but not reliable like FDI.

In India, foreign portfolio investment is regulated by the Securities and Exchange Board of India (SEBI). FPI in India refers to investment groups or FIIs (foreign institutional investors) and QFIs (qualified foreign investors).

19.4.2.1 SIGNIFICANCE OF FPI

Foreign portfolio investment or FPI is a form of investment wherein investors hold assets and securities outside their country. These investments could include stocks, bonds, exchange traded funds (ETFs) or mutual funds. It is one way in which an investor can partake in a foreign economy.

The reason FPI is watched carefully by experts is that it is an indicator of the stock market's performance. FPI also enhances stock market efficiency and ensures that there is a balance between value and the price of a stock.

Emerging economies which show a potential for growth that is higher than the investor's country tend to see a high level of participation by foreign investors. Another factor that influences FPIs is an attractive growth rate.

19.4.2.2 FEATURES OF FPI

Some important characteristics of Foreign Portfolio Investment are:

- Foreign portfolio investment (FPI) involves holding financial assets from a country outside of the investor's own.
- FPI holdings can include stocks, ADRs, GDRs, bonds, mutual funds, and exchange traded funds.
- Along with foreign direct investment (FDI), FPI is one of the common ways for investors to participate in an overseas economy, especially retail investors.
- Unlike FDI, FPI consists of passive ownership; investors have no control over ventures or direct ownership of property or a stake in a company.

19.4.2.3 CATEGORIES OF FPI (FOR INVESTMENTS INTO INDIA)

Earlier, FPI was divided into three categories, on the basis of their risk profile.

- Category I or low-risk: This kind of FPI includes government/government-related establishments like central banks and international agencies among others. An example could be a sovereign wealth fund or an SWF which is a fund owned by the state or its divisions.
- Category II or moderate-risk: This includes mutual funds, insurance firms, banks, and pension funds among others.
- Category III or high-risk: This type of foreign portfolio investment includes all other FPIs that don't fall into the first two categories. They could include charitable organisations such as trusts or societies, endowments or trusts among others.

However, as per a new notification in the second half of 2019, SEBI has sought to reclassify the categories and simplify norms. Accordingly, FPIs would come under two categories. All those entities or funds that were earlier registered as Category III are now Category II, accordingly, and the Category I is a mix of the earlier Category I and II.

19.4.2.4 ADVANTAGES OF FPI

- Foreign portfolio investments boost demand for stock of companies and help them when it comes to raising capital at low costs.

- The presence of FPI would mean a significant rise in the depth of the secondary market.
- From the investor’s perspective, it helps an investor add more diversity to their investments and benefit from such a diversification.
- Investors can also gain the benefit of exchange rate changes.
- Overseas markets provide investors a chance to a bigger market that may also sometimes not be as competitive as their home market. This means they benefit from the lower competition in a foreign country.
- A huge advantage of FPI is that it is liquid, ensuring that the investor is empowered and can move fast when there are good opportunities.

19.4.2.5 DISADVANTAGES OF FPI

- To the country receiving FPI, ie, the host, the unpredictability of such investments would mean a constant shift between markets over short periods. This gives rise to some amount of volatility.
- A sudden withdrawal of FPI could make an impact on the exchange rate. FPI may be risky at certain occasions, ie, when there is political instability in a country.

19.4.2.6 DIFFERENCE BETWEEN FPI AND FDI

Some major differences between the two investments are:

- FDI refers to a scenario when a direct business interest is established overseas. This business interest could be a warehouse or manufacturing entity for example.
- An FDI could lead to transfer of resources, knowledge and funds and involves a joint venture or setting up a subsidiary.
- Foreign direct investment is more long-term than foreign portfolio investment and also bulkier.
- Foreign direct investments are taken up by institutions or venture capital companies. Foreign portfolio investment is merely investing in the securities or assets of another country.
- Talking about the stock market, FPI involves buying shares or bonds that are made available on the foreign country’s exchange. FPI is liquid and can be bought and sold easily.
- While FPI involves investors who are passive, FDI is all about active investors. FPI is not a direct investment and is a short term form of investment when compared to FDI.

19.4.3 EXTERNAL COMMERCIAL BORROWING

External commercial borrowings (ECB) are the commercial loans in the form of bank loans, fixed rate or floating rate bonds, non-convertible or partially convertible or optionally convertible preference shares borrowed from the foreign resident with minimum average maturity of borrowing is three years. The ECB is one of the major sources of raising foreign debt capital by Indian corporates from foreign lenders. Reserve Bank of India in consultation with Department of Economics Affairs (Ministry of Finance) regulates the ECB. ECBs could be raised in two ways Automatic Route and Approval Route Raising ECBs under the automatic route does not require government or RBI approval. The following are the Eligible Borrowers of ECBs, under the Automatic Route (a) Corporates, including those in the hotel, hospital, software sectors (registered under the Companies Act, Non-Banking Finance Companies (NBFCs) - Infrastructure Finance Companies (IFCs), NBFCs - Asset Finance companies (AFCs), Small Industries Development Bank of India (SIDBI).b. Special Economic Zones (SEZ). (c) NBFCs-IFCs are permitted to avail of ECBs for on-lending to the infrastructure sector as defined under the ECB policy, (d) NBFCs-AFCs are permitted to avail of ECBs for financing the import of infrastructure equipment for leasing to infrastructure projects,(e) NonGovernment Organizations (NGOs) engaged in micro finance activities are eligible to avail of ECB.,(f) Micro Finance Institutions (MFIs). The borrower of the ECBs has to utilize the proceed in compliance the Regulation of ECBs, which permits the proceed to be utilized for some specific purposes (End Use) like Capital expenditure, modernization / expansion, import of capital goods, etc.. Working capital / repayment of Rupee loans with conditions prescribed in the regulation, to repay trade credit taken for period up to 3 years for capital expenditure, For payment towards capital goods already shipped / imported but not paid, Purchase of second hand domestic capital goods / plant / machinery etc

19.4.4 EURO ISSUE

Euro Issue are the financial instruments to raise funds from the non-resident investors, other than the domestic currency. In simple euro issue are sold in the foreign currency by the corporates to the foreign investors and the principal and the interest are supposed to be paid in the specified currency in which the instrument is issued. For example an Indian company may issue bonds or some other securities in U.S Dollar, Euro, Yen, British Pound or any other foreign currency other than Rupee. The following are the popular Euro Issue.

1. **American Depository Receipts (ADR)**- American depository receipts or ADR are just like any other stocks traded on the stock exchanges of USA but these stocks are not the stocks/shares of the companies registered in USA. These are the stocks/shares of companies registered in the foreign lands purchased by the banks or depository institutions of USA and converted into U.S dollar denominated ADR and sale to the resident investor of USA. ADR was introduced because of number problems in the process of purchasing stocks in the corporates registered in the foreign country.

How does Indian company raise capital through ADR? It is just simple, the Indian corporates issue shares to registered institutional depositories of USA, and they further issue these shares to the domestic investors of USA in the form of ADR. The principal and dividend are paid in U.S dollar. The ADR is a nice way to invest in the foreign corporates for U.S investor and for Indian corporates nice way to raise fund from non-resident investors. Likewise ADR, Indian investors invest in foreign securities through Indian Depositories Receipts.

Features-

1. An American depository receipt (ADR) is a certificate issued by a U.S. bank that represents shares in foreign stock.
2. ADRs trade on American stock exchanges.
3. ADRs and their dividends are priced in U.S. dollars.
4. ADRs represent an easy, liquid way for U.S. investors to own foreign stocks.
2. **Global Depository Receipts (GDR)-** Global Depository Receipts is a financial instrument in the form of depository created by the overseas depository banks/financial institutions issued in more than one country. GDR is just like ADR but traded in non-US market like Japan, London, Singapore, Honk Kong or any other stock exchanges.

Features:

1. It is an unsecured security
2. It may be converted into number of shares
3. Interest and redemption price is public in foreign agency
4. It is listed and traded in the stock exchange
5. Holders of gdr do not carry any voting rights .
3. **Foreign Currency Convertible Bonds.(FCCB):** FCCB are bonds issued by the Indian company expressed in foreign currency, to the non resident investors. The principal and interest in respect of instrument are paid in the specified foreign currency. The FCCB have to be issued in accordance with the “Issue of Foreign Currency Convertible Bonds and Ordinary Shares Scheme 1993”. The bonds is convertible into share of the issuing company in any manner like wholly or partly or on the basis of any equity related warrant attached to the debt security.

The investor of FCCB are mainly interested in the capital gain from the conversion of bonds into equity share of the issuing company hence it is not surprising that FCCB provide lower coupon to the investor. In addition to this the issue of FCCB must comply with FEMA (Foreign Exchange Management Act). FCCB has been a source of raising foreign capital since 1993. The convertible part of FCCB makes it a quasi-debt instrument, as the FCCBs holder possess the right to convert the bonds in to the equity share of the company. It gives taste of

both bond and share. FCCBs give an opportunity to raise capital from foreign lenders in foreign currency. FCCBs give advantages to both issuer and lender. Issuer get access to foreign capital at lower rate of interest and the lenders get fixed periodical coupon payments and capital gain from the appreciation in the share price. The holders of the bonds possess the option to convert the bonds into equity. Rationally the FCCBs holders would exercise the conversion right when they make decent capital gain otherwise ask for redemption. Conversion of bonds to equity has to be completed in the stipulated timeframe in accordance with the term and conditions of the issue. If the bondholders choose to convert the FCCBs, then the holder would receive shares of the issuing company at re-determined rate or at the rate determined when the FCCBs was subscribed. The conversion price normally adds some premium over the market price prevailing at the time of issue.

- 4. Foreign Currency Exchangeable Bonds(FCEB):** FCEB are the bond issued to the non-resident lender in foreign currency like FCCB but the difference is in regard to convertibility, that it would be exchangeable into equity share of other company (called offered company) wholly or partly or on the basis of any equity related warrant attached to the debt instrument.

Eligible Issuer- The Issuing Company shall be part of the promoter group of the Offered Company and shall hold the equity share/s being offered at the time of issuance of FCEB. Offered Company: The Offered Company shall be a listed company, which is engaged in a sector eligible to receive Foreign Direct Investment and eligible to issue or avail of Foreign Currency Convertible Bond (FCCB) or External Commercial Borrowings (ECB) There is a little difference between the FCCBs and FCEBs, in FCCBs the bonds would be converted into share/stock of issuing company on the other hand FCEBs are issued by holding company of group, hence provide the option of exchangeability of share in the group's subsidiary, as mentioned in the issue documents. Hence FCCBs involve only one company but FCEBs involves at least two companies.

19.4.5 FOREIGN VENTURE CAPITAL INVESTOR (FVCI)

FVCI is an investor registered and established outside India, which is registered under the Securities and Exchange Board of India (Foreign Venture Capital Investor) Regulations, 2000 {SEBI(FVCI) Regulations} and proposes to make investment in accordance with these Regulations. Which normally invest in Start-up Company with growth potential but also involve high risks.

Any company seeking registration under SEBI as FVCI shall make an application to the SEBI with the prescribed application fee. (USD 2500)

While considering an FVCI application, SEBI does review the applicant's track record, professional competence, financial soundness, experience, general reputation, whether the applicant is regulated by an appropriate foreign regulatory authority or is an income tax payer, amongst other factors. SEBI then forwards its approval to the RBI, which then grants its approval.

The board after reviewing the application, if satisfied that the applicant is eligible for grant of certificate, sends the intimation to the applicant for registration. (Registration Fee – USD 10,000)

19.4.6 BORROWING FROM INTERNATIONAL FINANCIAL INSTITUTIONS

Capital also borrowed from multilateral financial institutions like IBRD, IDA, ADB, BRICS Bank, IIDB, IFC etc. for major infrastructural development projects by the government and private undertakings. These kind of capital are borrowed for longer period of time normally 5 to 20 years period because the project to be financed from these capital are long term project like mega dams, water project, electric power generations, metro rail project, nuclear plant etc. Such borrowings are normally repaid in the lender's currency demand or domestic currency if agreed by the lenders. IFC (International Finance Corporation) is one the major multilateral financial lenders to the private sector undertaking.

19.4.7 FOREIGN AID

Foreign aid is concessional grant or loan normally given by the developed economy to the developing or underdeveloped economies or countries of strategic importance. Foreign aid is not like any other source of foreign capital, the developed countries apply huge political and economic equations before offering foreign aid to the countries in need. They either want access to market by demanding liberalization (open up the economy for international trade and business), access to the cheap labour market, raw material, consumer base, any defense deal or business deal etc. from the receiver. Grant element of foreign aid is exempted from repayment but the loan amount has to be paid back to the aid giver. These aid are given for specific purposes like infrastructure, education, poverty alleviation, construction of roads, dams, military, fighting terrorism etc. In addition to the developed countries multilateral institutions like IBRD, ADB, IDA etc. also provide Foreign Aid to the underdeveloped and developing countries with variable grant element.

19.5 SUMMARY

Foreign capital is a crucial precipitating factor for growth of an undertaking in an emerging economy where domestic capital in supply is normally limited. FDI is the investment made by an entity of an economy other than its national economy, into an entity of a foreign nation where it wants to have substantial influence and control over the entity. FPI are the foreign institutional or individual investors who invest in the security market other than the domestic security market, in different class of assets like bonds, debenture, equity etc The ECB is one of the major sources of raising foreign debt capital by Indian corporates from foreign lenders. Reserve Bank of India in consultation with Department of Economics Affairs (Ministry of Finance) regulates the ECB. Euro Issue are the financial instruments to raise funds from the non-resident investors, other than the domestic currency. Capital also borrowed from multilateral

financial institutions like IBRD, IDA, ADB, BRICS Bank, IIDB, IFC etc. for major infrastructural development projects by the government and private undertakings.

19.6 TEST YOUR PROGRESS

1. Explain Foreign Capital
2. What is the need for Foreign Capital
3. Explain various types of Foreign Capital

19.7 SUGGESTED READINGS

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UNIT-20 EXTERNAL COMMERCIAL BORROWING AND FOREIGN CURRENCY EXCHANGEABLE BONDS (FCCB)

UNIT STRUCTURE

- 20.0 Objectives
- 20.1 Introduction
- 20.2 External Commercial Borrowing
- 20.3 Foreign Currency Convertible Bonds
- 20.4 Foreign Currency Exchangeable Bonds
- 20.5 Summary
- 20.6 Test Your Progress
- 20.7 Suggested Readings

20.0 OBJECTIVES

After studying this module students will be able to:

- Know about the external commercial borrowing.
- Know about the revised guidelines related to the external commercial borrowings in India.
- Know about the foreign currency convertible bonds.
- Know about the foreign currency exchangeable bonds

20.1 INTRODUCTION

The World, where we are living today is widely different from the world which was two-three decades ago, we are no more claiming our world to be elliptical rather claiming it to be flat. Intense integration of economies at international platform and the rapid pace of globalization have made the world flatter, transfer of human capital, technology, financing abroad etc. become seamless. An organization could fulfil its financial needs from internal earnings, or by issuing financial security like debt or equity in the domestic as well as international markets. In the post liberalization era norms have been relaxed regarding raising capital from non- resident lenders for domestic entity facing capital deficit. The problems of limited domestic capital supply could be avoided from borrowing from international lenders. External commercial borrowing and FCCBs (Foreign Currency Convertible Bonds) are one of the instruments to raise

funds from the non-resident lender for the domestic companies. In India, External Commercial Borrowings and Trade Credits availed of by citizens are managed by clause (d) of sub-section 3 of section 6 of the Foreign Exchange Management Act, 1999 read with Notification No. FEMA 3/2000-RB viz. Foreign Exchange Management (Borrowing or Lending in Foreign Exchange) Regulations, 2000, dated May 3, 2000, as amended from time to time.

20.2 EXTERNAL COMMERCIAL BORROWING

The Reserve Bank of India defines External Commercial Borrowing (ECB) as follows: External Commercial Borrowings (ECB) : ECBs denote to commercial loans in the method of bank loans, securitized instruments (e.g. floating rate notes and fixed rate bonds, non-convertible, optionally exchangeable or partially convertible preference shares), buyers' credit, suppliers' credit availed of from non-resident mortgagees with a least average maturity of 3 years. External commercial borrowings (ECB) includes commercial bank loans, buyer's credit, supplier's credit, securitized instruments such as fixed rate bonds, credit from official credit export agency etc. raised from the international lenders who are non-resident to the domestic economy, like insurance funds, pension funds, international banks registered in the foreign lands, multidimensional financial institutions like International Finance Corporations (IFC), Asian Development Banks (ADB) etc. Why companies borrow from non-resident lenders, the logic is quite simple limited capital supply from the domestic lenders and the credit offered by the foreign lender is cheaper than domestic lenders.

External commercial borrowing (ECBs) are loans in India made by non-resident lenders in foreign currency to Indian borrowers. They are used widely in India to facilitate access to foreign money by Indian corporations and PSUs (public sector undertakings). ECBs include commercial bank loans, buyers' credit, suppliers' credit, securitised instruments such as floating rate notes and fixed rate bonds etc., credit from official export credit agencies and commercial borrowings from the private sector window of multilateral financial Institutions such as International Finance Corporation (Washington), ADB, AFIC, CDC, etc. ECBs cannot be used for investment in stock market or speculation in real estate. The DEA (Department of Economic Affairs), Ministry of Finance, Government of India along with Reserve Bank of India, monitors and regulates ECB guidelines and policies.

Most of these loans are provided by foreign commercial banks and other institutions. During the 2012, contribution of ECBs was between 20 and 35 percent of the total capital flows into India. Large number of Indian corporate and PSUs have used the ECBs as sources of investment

20.2.1 SIGNIFICANCE OF ECB

The significance of ECBs their size in India's balance of payment account. In the post reform period, ECBs have emerged a major form of foreign capital like FDI and FII.

During several years, contribution of ECBs was between 20 to 35 percent of the total capital flows into the country. Large number of Indian corporate and PSUs have used the ECBs as sources of investment.

Bulk of the overseas loans or ECBs into the country are obtained by private sector corporates. For the corporate, ECB is a dependable and easy to obtain fund and helps them to make business/investment expansion.

Unlike many other emerging market economies, India has a vibrant corporate sector at home. Many of them have overseas operations as well. The domestic financial market is not often able to provide big sized loans at competitive rate of interests to the corporate. Here, External Commercial Borrowings have emerged as a valuable source of investable resource of funds for domestic companies.

The government follows a well-designed ECB policy-putting restrictions on amount of loan that can be obtained by a company, end user restrictions, interest rate ceiling for ECBs, maturity period etc. In the same manner, government puts ceiling for the total amount of ECBs that can be obtained by all Indian firms through the ECB route during an year. At present, this aggregate limit is \$40 billion.

20.2.2 FEATURES OF ECB

The external commercial borrowings are considered as a source of finance to expand the existing capacity of the Indian corporates and finance new investment ventures, with an objective to have a sound economic growth.

The government of India seeks investment in the infrastructure and core sectors such as power, coal, railways, roads, telecom, etc. which are directly related to economic development of the country.

External commercial borrowings cannot be used for the investments in a stock market or any speculation business. And to keep a check on it, department of economic affairs, finance ministry, government of India and RBI monitor and regulates the policies of external commercial borrowings.

The ECBs is known as the money borrowed from the foreign sources or the non-resident lenders and include Commercial bank loans, Floating rate notes and fixed rate bonds (securitized instruments), Buyer's and supplier's credit, credit notes, mortgage-backed securities, etc.

Here, one thing should be made clear that such borrowing is a type of funding other than equity. This means, if the money is used to finance the core capital (equity shares, preference shares, convertible preference shares, convertible debentures, etc.) of any company, then it will be termed as a foreign direct investment and is not included under external commercial borrowings.

20.2.3 ROUTES OF ECB

ECBs can be issued under two routes:

- (a) Automatic Route of the RBI: Companies eligible to raise ECBs under this route do not need any permission.
- (b) Approval Route of the RBI: Companies which are ineligible to raise ECBs under the Automatic route need the prior permission of the RBI. Even if a company has a doubt as to whether or not it is eligible under the Automatic Route, then it can adopt the Approval Route.

1. Automatic Route- The important provisions of the latest ECB policy are as follows:

(a) Eligible borrowers:

- (i) Corporates registered under the Companies Act except financial intermediaries (such as banks, financial institutions (FIs), housing finance companies and NBFCs) are eligible. These entities can raise up to US\$500 million in any one financial year, either at one-shot or in tranches. An additional amount of USD 250 million can be raised with an average maturity period of more than 10 years.
- (ii) Certain Non-Government Organisations (NGOs) engaged in micro finance activities are eligible to avail ECB. These entities can raise up to US\$5 million in any one financial year.
- (iii) Any other entity as may be specified by the RBI.

(b) Recognised Lenders- The following category of lenders are allowed in case of an ECB under the Automatic Route:

- (i) Borrowers can raise ECB from internationally recognised sources such as international banks, international capital markets, multilateral financial institutions (such as IFC, ADB, CDC etc., export credit agencies, suppliers of equipment, foreign collaborators and foreign equity holders. Overseas organisations and individuals complying with following safeguards may provide ECB to NGOs engaged in micro finance activities.
- (ii) Overseas organisations planning to extend ECB would have to furnish a certificate of due diligence from an overseas bank which in turn is subject to regulation of host-country regulator and adheres to Financial Action Task Force (FATF) guidelines to the designated Authorised Dealer.
- (iii) An Individual Lender has to obtain a certificate of due diligence from an overseas bank indicating that the lender maintains an account with the bank for at least a period of two years. Other evidence/ documents such as audited statement of account, income tax return, need to be certified and forwarded by the overseas bank. Individual lenders from countries wherein banks are not required to adhere to Know Your Customer (KYC) guidelines cannot be lenders.

(iv) In case the ECB is from a “foreign equity holder” under the automatic route, then he would require minimum holding of equity required by him in the borrower’s company is as under:

- If the ECB is up to USD 5 million – then a minimum equity of 25 % must be held directly by the lender
- If the ECB is more than USD 5 million – then a minimum equity of 25% must be held directly by the lender and the debt-equity ratio of the company must not exceed 4:1(i.e., the proposed ECB should not exceed four times the direct foreign equity holding).

(c) Amount and Maturity- For ECBs up to USD 20 million or equivalent the minimum average maturity is 3 years. For ECB above USD 20 million and up to USD 500 million or equivalent the minimum average maturity is 5 years. The maximum amount of ECB which can be raised by a corporate is USD 500 million during a financial year. ECB up to USD 20 million can have a call/ put option provided the minimum average maturity of 3 years is complied before exercising call/ put option. An additional amount of USD 250 million can be raised with an average maturity period of more than 10 years.

(d) All-in-cost ceilings The all-in-cost ceilings for ECB currently valid are as follows:

Average Maturity Period	All-in-cost Ceilings over 6 month LIBOR*
3 to 5 years	150 basis points
More than 5years	250 basis points

* LIBOR = London Inter Bank Operating Rate

(e) End-use restrictions- There are several dos and don’ts as regards the utilisation of the ECB proceeds:

ECB can be raised only for investment (such as import of capital goods, new projects, modernisation/ expansion of existing production units) in real sector - industrial sector including small and medium enterprises (SME) and infrastructure sector - in India. Infrastructure sector is defined to mean power, telecommunication, railways, road including bridges, ports, industrial parks and urban infrastructure (water supply, sanitation and sewage projects);

- (i) ECB proceeds can be utilised for overseas direct investment in Joint Ventures (JV)/ Wholly Owned Subsidiaries (WOS) subject to the existing guidelines on Indian Direct Investment in JV/ WOS abroad.
- (ii) Utilisation of ECB proceeds is permitted in the first stage and second stage acquisition of shares in the disinvestment process of PSU shares.

- (iii) NGOs engaged in micro finance activities may utilise ECB proceeds for lending to self-help groups or for micro-credit or for bonafide micro finance activity including capacity building.
- (iv) Utilisation of ECB proceeds is not permitted for on-lending or investment in capital market or acquiring a company (or a part thereof) in India by a corporate.
- (v) Utilisation of ECB proceeds is not permitted in real estate. Recently, the use of ECBs have been prohibited even for the development of integrated townships.
- (vi) End-uses of ECB for working capital, general corporate purpose and repayment of existing Rupee loans are not permitted. This is a very crucial restriction which must be borne in mind while raising an ECB.
- (f) Guarantees- Banks, financial institutions and NBFCs, cannot issue guarantee, standby letter of credit, letter of undertaking or letter of comfort relating to ECB.
- (g) Security- The choice of security to be provided to the lender/ supplier is left to the borrower. However, creation of charge over immovable assets and financial securities, such as shares, in favour of overseas lender is subject to the FEMA Regulations.
- (h) Parking of ECB proceeds overseas- ECB proceeds should be parked overseas until actual requirement in India. They can be invested in short-term investment routes.
- (i) Prepayment- Prepayment of ECB up to USD 300 million may be allowed by Authorised Dealers without the prior approval of the RBI subject to compliance with the stipulated minimum average maturity period as applicable to the loan.
- (j) Refinance of existing ECB- Refinancing of existing ECB by raising fresh ECB at lower cost is allowed provided that the outstanding maturity of the original loan is maintained.

2. Approval Route- The following are the important provisions for ECBs covered under the Approval Route.

- (a) Eligible borrowers-
 - (i) Financial institutions dealing exclusively with infrastructure or export finance such as IDFC, IL&FS, Power Finance Corporation, Power Trading Corporation, IRCON and EXIM Bank are considered on a case by case basis.
 - (ii) Banks and financial institutions which had participated in the textile or steel sector restructuring package as approved by the Government are also permitted to the extent of their investment in the package and assessment by RBI based on prudential norms.

- (iii) Cases falling outside the purview of the automatic route limits and maturity period.
 - (iv) ECBs with minimum average maturity of 5 years by non-banking financial companies (NBFCs) from multilateral financial institutions, reputable regional financial institutions, official export credit agencies and international banks to finance import of infrastructure equipment for leasing to infrastructure projects.
- (b) Recognised Lenders- Borrowers can raise ECB from internationally recognised sources such as international banks, international capital markets, multilateral financial institutions (such as IFC, ADB, CDC etc., export credit agencies, suppliers of equipment, foreign collaborators and foreign equity holders. The requirement for an ECB from a foreign equity holder is that the minimum equity held directly by the foreign equity lender is 25% but the debt-equity ratio exceeds 4:1(i.e. the proposed ECB exceeds four times the direct foreign equity holding).
- (c) All-in-cost ceilings: Same as under the Automatic Route
- (d) End-use Restrictions: Same as under the Automatic Route
- (e) Guarantees- Issuance of guarantee, standby letter of credit, letter of undertaking or letter of comfort by banks, financial institutions and NBFCs relating to ECB is normally not permitted. However, the RBI will consider applications for providing guarantee/ standby letter of credit or letter of comfort by banks, financial institutions relating to ECB in the case of Small and Medium Enterprises on merit subject to prudential norms.
- (f) Security: Same as under the Automatic Route
- (g) Parking of ECB proceeds overseas: Same as under the Automatic Route
- (h) Prepayment-
- Prepayment of ECB up to USD 300 million may be allowed by Authorised Dealers without the prior approval of RBI subject to compliance with the stipulated minimum average maturity period as applicable to the loan.
 - Pre-payment of ECB for amounts exceeding USD 200 million would be considered by the Reserve Bank under the Approval Route.
- (i) Refinance of existing ECB:
- Refinancing of outstanding ECB by raising fresh ECB at lower cost is permitted subject to the condition that the outstanding maturity of the original loan is maintained.

20.2.4 REVISED GUIDELINES REGARDING ECB IN INDIA

With the objective of promoting ease of doing business in India, the Reserve Bank of India ("RBI") has simplified and liberalised the erstwhile

framework on external commercial borrowings/foreign currency denominated loans ("ECB") and the rupee denominated loans by notifying the Foreign Exchange Management (Borrowing and Lending) Regulations, 2018 ("**ECB Regulations**"), on December 17, 2018. The ECB Regulations have repealed the Foreign Exchange Management (Borrowing or Lending in Foreign Exchange) Regulations, 2000, and the Foreign Exchange Management (Borrowing or Lending in Rupees) Regulations, 2000 (collectively the "**Erstwhile Framework**").

The ECB Regulations together with the RBI circulars dated January 16, 2019 and February 7, 2019, and the Master Directions on External Commercial Borrowings, Trade Credits and Structured Obligations dated March 26, 2019, issued by RBI constitute the new framework on ECBs and the rupee denominated loans ("**New ECB Framework**") and has been made effective from January 16, 2019.

As a part of on-going effort, the Reserve Bank of India (RBI) has consolidated and liberalized the regulatory provisions dealing with borrowing and lending in foreign exchange as well as Indian Rupees (INR). It has combined two separate regulations[1] on these aspects and notified the Foreign Exchange Management (Borrowing and Lending) Regulations, 2018 (also referred to as **New ECB Regulations, 2018**) on 17 December 2018 (Notification No. FEMA.3(R)/2018-RB) effective from the said date.

Subsequent to the issue of the said **New ECB Regulations, 2018**, RBI with the intention to rationalize the extant ECB Master Direction, has also issued the ECB Policy – New ECB Framework vide circular No. 17 dated 16 January 2019 (herein referred as **New ECB Framework**).

The amended policy i.e. New ECB Framework will come into effect from the date of issuance i.e. 16 January 2019. **However, the Master Direction No. 5 (FED Master Direction No.5/2015-16) dated 1 January 2016 is yet to be updated to reflected the changes in New ECB Framework.**

Some of the major changes as per the new policy are as under:

1. The New ECB Framework has merged earlier Tracks I and II ECB as "Foreign Currency denominated ECB" and merged Track III and Rupee Denominated Bonds (RDBs) framework as "Rupee Denominated ECB".
2. The New ECB Regulations, 2018 has removed 'firm' from the definition of Indian Entity and has expanded its scope to include limited liability partnerships, which shall now be eligible to receive ECBs.
3. The revised framework has expanded the eligible borrowers to even include service sector and trading entities in line with the FDI Policy.
4. It is pertinent to note that the New ECB Framework does not cover provisions pertaining to Trade Credit. RBI may issue a separate notification for the same.
5. Late Submission Fess (LSF) for delay in reporting.

As per revised ECB framework, any borrower who is otherwise in compliance of ECB guidelines, except for a delay in reporting of drawdown of ECB proceeds before obtaining LRN or Form ECB 2 returns, can regularize the delay by payment of late submission fee for delay in reporting. The fees will have to be paid via demand draft in favor of RBI, or any mode specified therewith. The computation of late submission fees is as under:

<u>Form</u>	<u>Period of delay</u>	<u>Applicable LSF</u>
Form ECB 2	Up to 30 calendar days from due date of submission	INR 5,000
Form ECB 2 / Form ECB	Up to three years from due date of submission/date of drawdown	INR 50,000 per year
Form ECB 2 / Form ECB	Beyond three years from due date of submission/date of drawdown	INR 100,000 per year

20.2.5 ADVANTAGES OF ECB

The ECB structure is possessive of a variety of intrinsic benefits. ECB is a very attractive option for companies due to the advantages mentioned below:

- Availability of larger market can help companies satisfy larger requirements from global players in a better manner as compared to what can be achieved domestically.
- The cost of funds is usually cheaper from external sources if borrowed from economies with a lower rate of interest. Indian companies can usually borrow at lower rates from the U.S. and the Eurozone as interest rates are lower there compared to the home country, India.
- ECB is just a form of a loan and may not be of equity nature or convertible to equity. Hence, it does not dilute stake in the company and can be done without giving away control because debtors do not enjoy voting rights.
- The borrower can diversify the investor base.
- It provides access to international markets for the borrowers and gives good exposure to opportunities globally.
- The funds are available for relatively long term.
- The economy also enjoys benefits, as the government can direct inflows into the sector, have potential to grow. For example, the government may

allow a higher percentage of ECB funding in case of infrastructure and SME sector. This helps in an overall development of the country.

- Avenues of lower cost funds can improve the profitability of the companies and can aid economic growth.

20.2.6 DISADVANTAGES OF ECB

While a multitude of ECBs' strong points has been discussed, some disadvantages are worth considering too. Some of the demerits of ECB are given below:

- Higher debt on the company's balance sheet is usually viewed negatively by the rating agencies which may result in a possible downgrade by rating agencies which eventually might increase the cost of debt. This may also tarnish the company's image in the market and market value of the shares too in eventual times.
- Availability of funds at a cheaper rate may bring in lax attitude on the company's side resulting in excessive borrowing. This eventually results in higher (than requirement) debt on the balance sheet which may affect many financial ratios adversely.
- Since the borrowing is foreign currency denominated, the repayment of the principal and the interest needs to be made in foreign currency and hence exposes the company to exchange rate risk. Companies may have to incur hedging costs or assume exchange rate risk which if goes against may end up negative for the borrowers resulting into heavy losses for them.
- It is established that the ECBs can be availed at lower rates; however, there are several guidelines and restrictions that cannot be evaded. These restrictions primarily apply to the amount that can be borrowed, and the maturity of the External Commercial Borrowing. While amounts in excess of USD 20 million will have maturity periods of at least five years, amounts under USD 20 million will have maturity periods of at least three years on average.
- The External Commercial Borrowings are among the most commonly available sources of funding. Nonetheless, it goes without saying that companies must exercise caution with regard to the impact that the borrowing can have on their balance sheets, and exchange risks.

20.3 FOREIGN CURRENCY CONVERTIBLE BONDS

A foreign currency convertible bond (FCCB) is a type of convertible bond issued in a currency different than the issuer's domestic currency. In other words, the money being raised by the issuing company is in the form of foreign currency. A convertible bond is a mix between a debt and equity instrument. It acts like a

bond by making regular coupon and principal payments, but these bonds also give the bondholder the option to convert the bond into stock.

RBI defines FCCB as bond allotted by an Indian corporation communicated in foreign currency, and the main and interest about which are payable in foreign currency. The bonds are compulsory to be distributed in agreement with the scheme viz., "Issue of Foreign Currency Convertible Bonds and Ordinary Shares (Through Depository Receipt Mechanism) Scheme, 1993", and donated by a non-resident in foreign exchange and exchangeable into normal shares of the distributing company in any way, moreover in whole, or partly, on the base of any equity related warranties involved to debt instruments. FCCBs are administered by the 'Issue of Foreign Currency Convertible Bonds and Ordinary Shares (through Depository Receipt Mechanism) Scheme, 1993' as revised from time to time and Notification FEMA No.120/RB-2004 dated July 7, 2004.

The issuance of FCCBs was conveyed under the ECB guidelines in August 2005. Additionally to the necessities of (i) having the maturity of the FCCB not less than 5 years, (ii) the call & put option, if any, shall not be exercisable prior to 5 years, (iii) issuance of FCCBs only without any warranties attached, (iv) the issue correlated expenses not more than 4% of issue size and in case of private placement, shall not exceed 2% of the issue size, etc. as mandatory in terms of Notification FEMA No. 120/RB-2004 dated July 7, 2004. FCCBs are also subject to all the regulations which are applicable to ECBs.

The convertible part of FCCB makes it a quasi-debt instrument, as the FCCBs holder possess the right to convert the bonds in to the equity share of the company. It gives taste of both bond and share. FCCBs give an opportunity to raise capital from foreign lenders in foreign currency. FCCBs give advantages to both issuer and lender. Issuer get access to foreign capital at lower rate of interest and the lenders get fixed periodical coupon payments and capital gain from the appreciation in the share price. Like any other bonds, the FCCBs offer coupon rate but the coupon rates are normally very low because the lenders are most of the time interested in the capital gain from the conversion bonds to equity. Hence it is not surprising that FCCBs offer very low coupon rate. The coupon payment is made by the issuing entity to the bond holders on periodic intervals.

The holders of the bonds possess the option to convert the bonds into equity. Rationally, the FCCBs holders would exercise the conversion right when they make decent capital gain otherwise ask for redemption. Conversion of bonds to equity has to be completed in the stipulated timeframe in accordance with the term and conditions of the issue. If the bondholders choose to convert the FCCBs, then the holder would receive shares of the issuing company at re-determined rate or at the rate determined when the FCCBs was subscribed. The conversion price normally adds some premium over the market price prevailing at the time of issue.

While foreign currency convertible bonds are issued to raise finance, ECB refers to commercial loans which can be in the form of bank loans, bonds, securitized instruments, buyers' credit and suppliers credit availed from non-resident lenders with a minimum average maturity of 3 years.

20.3.1 SIGNIFICANCE OF FCCB

Foreign currency convertible bond is a special type of bond issued in the currency other than the home currency. In other words, companies issue foreign currency convertible bonds to raise money in foreign currency.

In today's scenario of globalization, FCCBs hold high significance especially for multi-national companies wherein they are constantly dealing with different currencies of the world.

A company may decide to raise money outside its home country to gain access to new markets for new or expansionary projects. FCCBs are generally issued by companies in the currency of those countries where interest rates are usually lower than the home country or foreign country economy is more stable than the home country economy. Due to the equity side of the bond, which adds value, the coupon payments on the bond are lower for the issuer than a straight coupon-bearing plain vanilla bond, thereby, reducing its debt-financing costs. In addition, a favorable move in the exchange rates can reduce the issuer's cost of debt, which is the interest payment made on bonds.

Since the principal has to be repaid at maturity, an adverse movement in exchange rates in which the local currency weakens can cause cash outflows on repayment to be higher than any savings in interest rates, resulting in losses for the issuer. In addition, issuing bonds in a foreign currency exposes the issuer to any political, economic, and legal risks prevalent in the country. Furthermore, if the issuer's stock price declines below the conversion price, FCCB investors will not convert their bonds to equity, which means the issuer will have to make the principal repayments at maturity.

An FCCB investor can purchase these bonds at a stock exchange, and has the option to convert the bond into equity or a depository receipt after a certain period of time. Investors can participate in any price appreciation of the issuer's stock by converting the bond to equity. Bondholders take advantage of this appreciation by means of warrants attached to the bonds, which are activated when the price of the stock reaches a certain point.

20.3.2 FEATURES OF FCCB

Let us look at some peculiar features of FCCBs that make them a luring investment option for investors.

- Like any other type of bond, an FCCB makes regular coupon and principal payments till a certain date, after which it can be converted into equity.
- FCCBs retain all the features of a convertible bond and hence remain attractive to both issuers and investors.
- Another attractive feature of FCCBs is that these are equity-linked debt securities which give the holder the right to convert the bond into equity or a depository receipt (DR) after a certain period of time.

- FCCBs are tradable on the stock exchange.
- Like any other debt raising instrument, FCCBs appear on the liabilities side of the balance sheet of the company issuing them.

20.3.3 REGULATORY FRAMEWORK

The FEMA Guidelines provide for the issue of an FCCB. Further, the ECB Guidelines also apply to FCCBs. Hence, all the provisions mentioned for ECBs would also apply to an FCCB. The important provisions of the FEMA Guidelines as applicable to FCCBs are summarised below:

- (a) No person resident in India is permitted to issue or transfer a foreign security without special or general permission of the RBI. However, an Indian Company or a Body Corporate created by an Act of Parliament is given permission to:
 - i) issue FCCBs not exceeding USD 500 million to a person resident outside India in accordance with and subject to the specified conditions.
 - ii) issue FCCBs beyond US \$ 500 million with the specific approval of the Reserve Bank.
- (b) The company/ body corporate, issuing the FCCBs shall, within 30 days from the date of issue, furnish a report to the Reserve Bank giving the specified details and documents.
- (c) The FCCBs must conform to the Foreign Direct Investment Policy (including Sectoral Cap and Sectors where FDI is permissible) of the Government of India as announced from time to time and the Reserve Bank's Regulations/directions issued from time to time.
- (d) The issue of FCCBs shall be subject to a ceiling of USD 500 million in any one financial year.
- (e) In case of a public issue of FCCBs, it shall be only through reputed lead managers in the international capital market. In case of a private placement, the placement shall be with banks, or with multilateral and bilateral financial institutions, or foreign collaborators, or foreign equity holder having a minimum holding of 5% of the paid up equity capital of the issuing company. Private placement with unrecognised sources is not permitted.
- (f) The maturity of the FCCB must not be less than 5 years. Any call and put option, cannot be exercisable before 5 years.
- (g) Issue of FCCBs with attached warrants is not permitted.
- (h) The "all in cost" will be on par with those prescribed for External Commercial Borrowing (ECB) schemes, which is as under:

Average Maturity Period	All-in-cost Ceilings over 6 month LIBOR*
3 to 5 years	150 basis points
More than 5 years	250 basis points

*LIBOR = London Inter Bank Operating Rate

- (i) The FCCB proceeds shall not be used for investment in Stock Market, and may be used for such purposes for which ECB proceeds are permitted to be utilized under the ECB schemes.
- (j) FCCBs are allowed for corporate investments in industrial sector, especially infrastructure sector. Funds raised through the mechanism may be parked abroad unless actually required.
- (k) FCCBs for meeting rupee expenditure under automatic route must be hedged unless there is a natural hedge in the form of uncovered foreign exchange receivables.
- (l) Financial intermediaries (viz. a bank, DFI, or NBFC) are not allowed to raise FCCBs, except those Banks and financial intermediaries that have participated in the Textile or Steel Sector restructuring package of the Government/ RBI subject to the limit of their investment in the package.

Further, FCCBs can also be raised by housing finance companies satisfying the following minimum criteria:

- (i) the minimum net worth of the financial intermediary during the previous three years shall not be less than Rs. 500 crore,
- (ii) it must be listed either on the BSE or on NSE,
- (iii) the minimum size of the FCCB is US\$ 100 million, (iv) the applicant should submit the purpose/ plan of utilization of funds. Recently, HDFC raised an \$500 million by way of an FCCB issue.
- (m) Banks, FIs, NBFCs cannot provide guarantee/letter of comfort etc. for the FCCB issue.
- (n) The issue related expenses shall not exceed 4% of issue size and in case of private placement, shall not exceed 2% of the issue size.
- (o) The issuing entity shall, within 30 days from the date of completion of the issue, furnish a report to the concerned Regional Office of the Reserve Bank of India through a designated branch of an Authorized Dealer giving the prescribed details and documents.

20.3.4 ADVANTAGES OF FCCB

- FCCBs issuance allows companies to raise money outside the home country there by enabling tapping new markets for investment options

- FCCBs are generally issued by companies in the currency of those countries where interest rates are usually lower than the home country or the foreign country economy is more stable than the home country economy.
- FCCB holders may choose to convert the bonds into equity to benefit out of the equity price appreciation that may have taken place.
- FCCB holders enjoy the safety of guaranteed payments on the bond and may opt to continue with the bond if equity or depository receipt if conversion isn't more beneficial.
- Since these bonds come with an advantage to the bond holder, the coupon payments on these bonds are usually lower than a straight coupon bearing plain vanilla bond. This helps the issuer to reduce the cost of borrowing.
- Exchange rate fluctuations in favour of the issuer can further reduce the cost of debt capital.
- The conversion of FCCBs into equity usually happens at a price already decided at the time of issuance and is usually at a premium, so dilution of the company is lower.

20.3.5 DISADVANTAGES OF FCCB

- Companies that borrow funds via FCCB in foreign currency shall have to make the repayment in foreign currency on the maturity of the bond. The exchange rate prevailing on the day of maturity, if has moved considerably as compared to the rate prevailing on the day of the borrowing, may result in losses for the company. The exchange rate in a volatile scenario may cause cash outflows on repayment to be much higher than the saving in the interest rate. Thus, a cost-saving motive may be totally taken off if home currency depreciates beyond the interest rate saving.
- If the stock prices do not appreciate and instead depreciate, the bond holders might refrain from converting bonds to equity and the money might have to be repaid by the issuer on bond maturity. Hence, if the company is going through a bad phase, the stocks may not do well and therefore, may not be converted to equity by FCCB holders. In such a scenario, the already troubled company may face an additional burden of interest and principal repayment to be made to the bondholders. Hence, an FCCB may be suitable in a bull market scenario and may be affected by bear market phases.
- Issuing bonds in foreign currency in a foreign market may always be exposed to a legal, political and economic risk of that foreign country. One may have much better idea about the macro-economic conditions of the home country compared to those in a foreign country.
- FCCBs continue to remain on the books of accounts as a debt until the time it is converted and continues to hamper the debt to equity ratio and other debt and interest service coverage ratios.

20.3.6 DIFFERENCE BETWEEN ECB AND FCCB

ECB is a broad term and includes all foreign currency borrowings that are due and is repayable in the currency in which it was borrowed. They usually constitute short term loan that is usually borrowed at Libor (London Interbank rate) + premium/Spread. This can be anywhere between 200 to 500 basis points depending on the corporates standing in the market.

FCCB on the other hand is a bond and usually for a long tenor. When corporates see an opportunity to buy back bonds issued by them at a discount to the face value and also the book value recorded by the corporate it engages in a treasury operation of buying back its own bond. This capital which it requires to buyback its capital is either internally accrued or borrowed again through ECBs.

20.4 FOREIGN CURRENCY EXCHANGEABLE BONDS

RBI describes FCEBs as a bond uttered in foreign exchange, the principal and interest regarding which are allocated in foreign currency, distributed by an Issuing Company and contributed to by a person who is a resident outside India, in foreign currency and transferrable into equity share of another company, to be termed as the Offered Company, in any manner, either entirely, or partly or on the basis of any equity related warrants committed to debt instruments.

Eligible Issuer- The Issuing Company shall be part of the organizer group of the Offered Company and intend to hold the equity share/s being obtainable at the time of issuance of FCEB. Offered Company: The Offered Company intend to be a listed company, which is involved in a sector suitable to receive Foreign Direct Investment and qualified to issue of Foreign Currency Convertible Bond (FCCB) or External Commercial Borrowings (ECB).

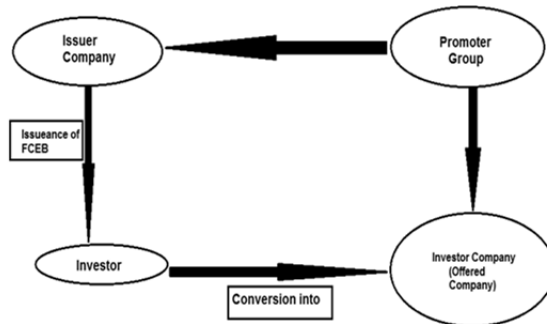
The FCEBs must conform with the “Issue of Foreign Currency Exchangeable Bonds (FCEB) Scheme, 2008”, informed by the Government of India, Ministry of Finance, Department of Economic Affairs vide Notification G.S.R.89(E) dated February 15, 2008. The guidelines, rules, etc. governing ECBs are also applicable to FCEBs.

There is a little difference between the FCCBs and FCEBs, in FCCBs the bonds would be converted into share/stock of issuing company on the other hand FCEBs are issued by holding company of group, hence deliver the selection of exchangeability of share in the group’s subsidiary, as mentioned in the issue documents. Hence FCCBs involve only one company but FCEBs involves at least two companies.

How ECB and FCCBs are issued to raise capital by Companies in India, who are the eligible borrowers, who are the eligible non-resident lenders, what are the purposes of issue (End Use), how payment has to be made etc., have to be in compliance with FEMA 1999 and the regulations/ notifications issued by RBI in consultation with Department of Economic Affairs (Ministry of Finance) time to time.

An FCEB involves three parties: The issuer company, offered company (OC) and an investor.

Under this option, an issuer company may issue FCEBs in foreign currency, and these FCEBs are convertible into shares of another company (offered company) that forms part of the same promoter group as the issuer company. For example, company ABC Ltd issues FCEBs, then these FCEBs will be convertible into shares of company XYZ Ltd that are held by company ABC Ltd and where companies ABC Ltd and XYZ Ltd form part of the same promoter group.



Thus FCEBs are exchangeable into shares of offered company. They have an inherent advantage that it does not result in dilution of shareholding at the offered company level.

20.4.1 SIGNIFICANCE OF FCEB

Traditionally, overseas acquisitions were being funded through a verity of sources such as drawl of Foreign Exchange in India, Capitalization of Exports, External Commercial Borrowings (ECBs), Foreign Currency Convertible Bonds (FCCBs), Shares conversion/exchanges through American Depository Receipts (ADRs)/Global Depository Receipts (GDRs), Preference Shares (i.e. non-convertible, optionally convertible or partially convertible) and balance held in Exchange Earner’s Foreign Currency Accounts (EEFCs). A substantial portion of foreign investments take place through Special Purpose Vehicles (SPVs) set-up in overseas for specific purpose, Existing Wholly Owned Subsidiaries (WOS)/Joint Ventures (JV) are being used to fund acquisitions through Leverage Bay-Out (LBO) Rout.

Mr. P. Chidambaram, India’s Finance Minister in his Budget speech 2007-08 promised a mechanism for Indian Companies to unlock part of their holdings in its group companies to meet financing needs by issuing exchangeable bonds. This led to the formulation of new scheme in February 15, 2008, of the Issue of Foreign Currency Exchangeable Bonds Scheme 2008 vide Notification GSR 89 (E). In order to facilitated the issuing of Foreign Currency Exchangeable Bonds (FCEBs) by Indian Companies the Reserve Bank of India issue a A.P. (DIR Series) Circular No. 17 dated September 23, 2008 to operation the above mention FCEB Scheme 2008.

20.4.2 FEATURES OF FCEB

The launch of the FCEB scheme affords a unique opportunity for Indian promoters to unlock value in group companies. FCEBs are another arrow in the quiver of Indian promoters to raise money overseas to fund their new projects and acquisitions, both Indian and global, by leveraging a part their shareholding in listed group entities.

Some key features of FCEB are:

- A bond expressed in foreign currency.
- The principal and the interest of which is payable in foreign currency.
- The issuer of the bond is an Indian company.
- The bonds are subscribed by a person resident outside India.
- The bonds are exchangeable into equity shares of another company which is also called the offered company.

It may be noted that issuing company is to be the part of promoter group of offered company and the offered company is to be listed and be eligible to receive foreign investment.

20.4.3 ISSUE OF FOREIGN CURRENCY EXCHANGEABLE BONDS (FCEB) SCHEME, 2008

In financial year 2007-08, the Indian Government notified the Foreign Currency Exchangeable Bonds Scheme, 2008 for the issue of FCEBs. The provisions of the scheme is as under:

Eligibility conditions and subscription-

- The issuing company should be part of the promoter group of the offered company and should hold the equity share/s being offered at the time of issuance of foreign currency exchangeable bond.
- The offered company should be a listed company which is engaged in a sector eligible to receive foreign direct investment and eligible to issue or avail of foreign currency convertible bond.
- The subscriber to the foreign currency exchangeable bond should comply with the foreign direct investment policy and adhere to the sectoral caps at the time of issuance of FCEB.

End-use requirements- Issuing company

- The proceeds of FCEB may be invested by the issuing company overseas by way of direct investment including in joint ventures or wholly owned subsidiaries abroad.
- The proceeds of FCEB may be invested by the issuing company in the promoter group companies.

Operational procedure- Prior approval of the Reserve Bank of India is required for issuance of foreign currency exchangeable bond.

Maturity- The minimum maturity of the FCEB is five years for purpose of redemption. The exchange option can be exercised at any time before redemption. While exercising the exchange option, the holder of the bond should take delivery of the offered shares. Cash (net) settlement of these bonds is not permissible.

Taxation on exchangeable bonds-

1. Interest payments on the bonds, until the exchange option is exercised, is subject to deduction of tax at source as per the provisions of Section 115 AC of the Income Tax Act, 1961.
2. Tax on dividend on the exchanged portion of the bond is in accordance with the provisions of Section 115 AC of the Income Tax Act, 1961.
3. Exchange of foreign currency exchangeable bonds into shares shall not give rise to any capital gains liable to income-tax in India.
4. Transfers of these exchangeable bonds made outside India by an investor who is a person
5. resident outside India to another investor who is a person resident outside India shall not give rise to any capital gains liable to tax in India.

20.4.4 ADVANTAGES OF FCEB

- The launch of the Foreign Currency Exchangeable Bonds (FCEB) scheme affords a unique opportunity for Indian promoters to unlock value in group companies.
- FCEBs are another arrow in the quiver of Indian promoters to raise money overseas to fund their new projects and acquisitions, both Indian and global, by leveraging a part their shareholding in listed group entities.
- FCEBs carry an option for the investor to exchange the bonds into shares of OC, which are held by the issuer and are listed on a stock exchange.
- Unlike FCCBs that convert into shares of issuer itself, FCEBs are exchangeable into shares of OC.
- FCEB has an inherent advantage that it does not result in dilution of shareholding at the OC level. FCEB proceeds can be deployed overseas in a joint venture/subsidiary or for making acquisitions. Alternatively, the proceeds can be invested in promoter group companies in India. The investee company can utilise the said proceeds for end-uses permitted under ECB guidelines. The minimum maturity period for FCEB redemption must be five years.

- Exchange option can be exercised any time before redemption. Investors are permitted to sell OC shares received upon exchange. However, a cash settlement is not permitted.
- The minimum benchmark exchange price shall be higher of two weeks or six months average prices of OC, with reference to board resolution date of issuer, authorising FCEB issue.

20.4.5 DISADVANTAGES OF FCEB

- There is a risk of exchange as the interest is to be paid in foreign currency. In other words if the exchange rate increases the issuer will have to pay more to the investors.
- If the stock price is lower than the redemption amount investors would seek redemption of bond instead of conversion; this may take a toll on the earnings of the company as the company will have to refinance to fulfil the promise of redemption made.
- More risk of volatility of the market as more than one economy come into picture.
- Foreign currency convertible bond (FCCB) remains as a liability for the company and it shrinks the current ratio of the company.
- Unlike in case of FCCBs, the FCEB scheme does not provide the option to benchmark exchange price with reference to conversion date.

20.4.6 DIFFERENCE BETWEEN FCCB AND FCEB

Foreign Currency Convertible Bonds (FCCBs) mean a bond issued by an Indian company expressed in foreign currency, and the principal and interest in respect of which is payable in foreign currency. Further, the bonds are required to be issued in accordance with the scheme viz., "Issue of Foreign Currency Convertible Bonds and Ordinary Shares (Through Depository Receipt Mechanism) Scheme, 1993", and subscribed by a non-resident in foreign currency and convertible into ordinary shares of the issuing company in any manner, either in whole, or in part, on the basis of any equity related warrants attached to debt instruments.

Foreign Currency Exchangeable Bond (FCEB) means a bond expressed in foreign currency, the principal and interest in respect of which is payable in foreign currency, issued by an Issuing Company and subscribed to by a person who is a resident outside India, in foreign currency and exchangeable into equity share of another company, to be called the Offered Company, in any manner, either wholly, or partly or on the basis of any equity related warrants attached to debt instruments. The FCEB must comply with the "Issue of Foreign Currency Exchangeable Bonds (FCEB) Scheme, 2008", notified by the Government of India, Ministry of Finance, Department of Economic Affairs vide Notification G.S.R.89(E) dated February 15, 2008.

There are following differences between FCCBs and FCEBs:

1. The essential differences between an FCCB and FCEB lies in their convertibility. Unlike an FCCB which is convertible into new shares of the issuing company, an FCEB is convertible into existing shares of the offered company held by the issuing company.
2. The shares issued on conversion of FCCB would be issued a fresh by issuing company on conversion, whereas when the investor in FCEB want shares in exchange, he has to approach to issuing company which has already hold shares of offered listed company.
3. The Company that issue FCCB and the Company that issue shares on conversion are same and one whereas in case of FCEB the Company that issue FCEB and the Company whose shares are offered on exchange will be different but should belong to the same promoter group.
4. FCCBs are issued by an Indian Company to a person resident outside India giving them an option to convert them into shares of the company at a pre determined price. On the other hand, FCEBs are issued by Indian Investment Company or Holding Company of a group to non-resident which are exchangeable for the shares of a specified group company at a pre determined price.
5. In case of FCCBs issue, there is a change in the shareholding of issuing company on the other hand, in case of FCEBs issue there is no changes in the shareholding of issuing company.

20.5 SUMMARY

External commercial borrowing (ECBs) are loans in India made by non-resident lenders in foreign currency to Indian borrowers. They are used widely in India to facilitate access to foreign money by Indian corporations and PSUs (public sector undertakings). ECBs include commercial bank loans, buyers' credit, suppliers' credit, securitised instruments such as floating rate notes and fixed rate bonds etc., credit from official export credit agencies and commercial borrowings from the private sector window of multilateral financial Institutions such as International Finance Corporation (Washington), ADB, AFIC, CDC, etc. ECBs cannot be used for investment in stock market or speculation in real estate. The DEA (Department of Economic Affairs), Ministry of Finance, Government of India along with Reserve Bank of India, monitors and regulates ECB guidelines and policies.

A foreign currency convertible bond (FCCB) is a type of convertible bond issued in a currency different than the issuer's domestic currency. In other words, the money being raised by the issuing company is in the form of foreign currency. A convertible bond is a mix between a debt and equity instrument. It acts like a bond by making regular coupon and principal payments, but these bonds also give the bondholder the option to convert the bond into stock.

20.6 TEST YOUR PROGRESS

1. What is External Commercial Borrowing
2. Explain the Foreign Currency Convertible Bonds
3. What is Foreign Currency Exchangeable Bonds

20.7 SUGGESTED READINGS

- Reilly, Frank K. 1979, Investment Analysis & Portfolio Management, Hinsdale, Illinois : The Dryden Press.
- Pandian Punithavathy, 2001, Security Analysis and Portfolio Management, Vikas Publishing House Pvt. Ltd., New Delhi.
- Kevin S., 2000, Portfolio Management, Prentice-Hall of India Pvt. Ltd., New Delhi.

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