LOVELY PROFESSIONAL UNIVERSITY

STOCK MARKET OPERATIONS

Edited By

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Printed by
EXCEL BOOKS PRIVATE LIMITED
A-45, Naraina, Phase-I,
New Delhi-110028
for
Lovely Professional University
Phagwara

SYLLABUS

Stock Market Operations

Objectives:

- To provide an introduction to the financial markets and to analyze the role of financial markets for the broader macro economy.
- To help them to understand the practical aspects of primary and secondary market operations.
- The course will help them in building career in stock market/broking houses.

Sr. No.	Description
1	Basics of investment: nature, feature and types of investors.
2	Security Market: An overview, market terminology and investment procedure in primary and Secondary market.
3	Portfolio Theory: Risk-Return Analysis, systematic and unsystematic risk and risk measurement
4	Trading System in stock exchange: Introduction, NEAT & BOLT, Screen based trading System (SBTS), Market phases, order management, trade management, Market Window operations and Auction
5	Trading Strategies: long v/s short and brief introduction to hedging, daily settlement and market Margins
6	Practical Industry Analysis: Stock selection (Fundamental analysis)
7	Practical Industry Analysis: Stock selection (Technical analysis)
8	Overview: Derivatives , ULIPs, Mutual funds
9	Commodity Currency
10	Currency market/ forex

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Unit 1: Basics of Investment

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Objectives

After studying this unit, you will be able to:

- Explain the concept of Investment
- Discuss the investment process
- Elaborate the features of Investments
- Discuss the types of Investors

Introduction

Investment involves making of a sacrifice in the present with the hope of deriving future benefits. Investment has many meanings and facets. The two most important features of an investment are current sacrifice and future benefit. We can identify a variety of activities which display the two features of investment. For example, a portfolio manager buys 10,000 shares of ITC Ltd. for his mutual fund; your relative may have subscribed to the 6-year Post Office Monthly Income Scheme. A corporate firm may spend ₹ 5 crores for expansion programmers; a middle-aged man with a family decides to spend ₹ 10 lakhs to buy an apartment in a city and so on. All these constitute investment activities because they involve current sacrifice of consumption and hope of future gain.

In other words, investment refers to a commitment of funds to one or more assets that will be held over some future time period. Almost all individuals have wealth of some kind, ranging from the value of their services in the workplace to tangible assets to monetary assets. Anything not consumed today and saved for future use can be considered an investment. For our purposes, investment will mean a measurable asset retained in order to increase one's personal wealth.

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1.1 Concept of Investment

We invest in order to improve our future welfare. Funds to be invested come from assets already owned, borrowed money, and savings or foregone consumption. By foregoing consumption today and investing the savings, we expect to enhance our future consumption possibilities. Anticipated future consumption may be by other family members, such as education funds for children or by ourselves, possibly in retirement when we are less able to work and produce for our daily needs. Regardless of why we invest, we should all seek to manage our wealth effectively, obtaining the most from it. This includes protecting our assets from inflation, taxes and other factors.

1.1.1 How Do We Invest?

If we are making investment decisions today that will directly affect our future wealth, it would make sense that we utilize a plan to help guide our decisions. Surprisingly, the majority of people do not have in place any type of formalized investment plan. Taking some time to put together a financial plan can reap tremendous benefits. First, let's define financial planning.

Financial planning is the process of meeting your life goals through the proper management of your finances. Life goals can include buying a home, saving for your child's education or planning for retirement.

Financial planning provides direction and meaning to your financial decisions. It allows you to understand how each financial decision you make affects other areas of your finances. For example, buying a particular investment product might help you pay off your mortgage faster or it might delay your retirement significantly. By viewing each financial decision as part of a whole, you can consider its short and long-term effects on your life goals. You can also adapt more easily to life changes and feel more secure that your goals are on track.

1.1.2 Nature of Investment Decisions

You have understood that an individual invests or postpones current consumption only in response to a rate of return which must be suitably adjusted for inflation and risk. The basic postulate, in fact, unfolds the nature of investment decisions. Let us explain as follows:

Cash has an opportunity cost and when you decide to invest it, you are deprived of this opportunity to earn a return on that cash. Also, when the general price level rises the purchasing power of cash reduces. This explains the reason why individuals require a 'real rate of return' on their investments. Now, within the large body of investors, some buy government securities or deposit their money in bank accounts that are adequately secured. In contrast, some others prefer to buy, hold, and sell equity shares even when they know that they get exposed to the risk of losing their money much more than those investing in government securities. You will find that this latter group of investors is working towards the goal of getting larger returns than the first group and, in the process, does not mind assuming greater risk. Investors, in general, want to earn as large returns as possible subject, of course, to the level of risk that can possibly bear.

The risk factor gets fully manifested in the purchase and sale of financial assets, especially equity shares. It is common knowledge that some investors lose even when the securities markets boom. So there lies the risk.

You may understand risk, as the probability that the actual return on an investment will be different from its expected return. Using this definition of risk, you may classify various investments into risk categories.

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Thus, government securities would be seen as risk-free investments because the probability of actual return diverging from expected return is zero. In the case of debentures, say of a company like TELCO or GRASIM, again the probability of the actual return being different from the expected return would be very little because the chance of the company defaulting on stipulated interest and principal repayments is quite low. You would obviously put equity shares in the category of 'high risk' investment for the simple reason that the actual return has a great chance of differing from the expected return over the holding period of the investor which may range from one day to a year or more.

Investment decisions are premised on an important assumption that investors are rational and hence prefer certainty. They are risk averse which implies that they would be unwilling to take risk just for the sake of risk. They would assume risk only if an adequate compensation is forthcoming. And the dictum of 'rationality' combined with the attitude of 'risk aversion' imparts to investment their basic nature. The question to be answered is: how best to enlarge returns with a given level of risk? Or how best to reduce risk for a given level of return? Obviously, there would be several different levels of risk and different associated expectations of return.

Notes The basic investment decision would be a trade-off between risk and return.

Self Assessment

Fill in the blanks:

1. ..... is the process of meeting your life goals through the proper management of your finances.
2. ..... decisions are premised on an important assumption that investors are rational and hence prefer certainty.
3. ....., is the probability that the actual return on an investment will be different from its expected return.

1.2 The Investment Process

After understanding the concept of investment and the nature of the investment decision you might now like to know as to how does an investor go about the task or business of investing? How much to invest at any moment? And when to make or unmake the investment? These questions essentially relate to the investment process which is briefly outlined in this section. A typical investment decision undergoes a five step procedure which, in turn, forms the basis of the investment process. These steps are:

1. Determine the investment objectives and policy
2. Undertake security analysis
3. Construct a portfolio
4. Review the portfolio
5. Evaluate the performance of the portfolio

You may note at the very outset that this five-step procedure is relevant not only for an individual who is on the threshold of taking his own investment decisions but also for individuals and institutions who have to aid and work out investment decisions for others i.e., for their clients.

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The investment process is a key-process entailing the whole body of security analysis and portfolio management. Let us understand the each of the five elements in the investment process.

1. ***Investment Objectives and Policy:*** The investor will have to work out his objectives first and then evolve a policy with the amount of investible wealth at his command. An investor might say that his objective is to have 'large money'. You will agree that this would be a wrong way of stating the objective. You would recall that the pursuit of 'large money' is not possible without the risk of 'large losses'. Hence, the objectives of an investor must be defined in terms of risk and return.

   The next step in formulating the investment policy of an investor would be the identification of categories of financial assets he/she would be interested in. It is obvious that they in turn, would depend on the objectives, amount of wealth, and the tax status of the investor. For example, a tax-exempt investor with large investible wealth like a pension/provident fund would invest in anything but tax-exempt securities unless compelled by law to do so. Similarly, individual investors would, in general, have low inclination to invest in preference shares.

2. ***Security Analysis:*** This step would consist of examining the risk-return characteristics of individual securities or groups of securities identified under step one. The aim here is to know if it is worthwhile to acquire these securities for the portfolio. Now, this would depend upon the extent to which it is 'mispriced'. And there are two broad approaches to finding out the 'mispriced status' of individual securities. One approach is known as 'technical analysis'. The analyst here studies part movements in prices of securities he is interested in, to determine the trends and patterns that repeat themselves. Then he studies more recent price movements to know about some emerging trend. The two are then integrated to predict if a given trend will repeat in future. The current market price is compared with the predicted price and the extent of 'mispricing' is determined. You should note that there would be absence of 'mispricing' only if the current price is equal to the predicted price. The second approach is known as 'fundamental analysis'. The analyst here works out a true or intrinsic value of a security and compares it with the current market price. The intrinsic value is the present value of all cash flows that the owner of the security expects to receive during and at the end of his holding period.

   This, in effect, involves a two-step exercise: first, forecast the cash-flow i.e., expected stream of dividends (in the case of equity shares) for which a forecast of earnings of the company and its payout ratios would have to be obtained. A forecast of the real estate price of the security at the end of the holding period would also be needed. This would then be followed by a discounting of these forecast cash flows at some rate of discount which may correspond to the investor's required rate of return. The fundamental analyst now compares the intrinsic value with the current market price as already observed. If the current market price is more than the true value, the share is overvalued and vice versa. Fundamental analysts believe that notable cases of mispricing will be corrected by the market in future, which implies that prices of undervalued shares will increase and those of overvalued shares will decline.

3. ***Portfolio Construction:*** This consists of identifying the specific securities in which to invest and determining the proportion of the investor's wealth to be invested in each. For example, a conservative individual may decide to invest, say, 70% of his cash in debentures and the remaining 30% in equity shares. On the other hand, an individual who is prepared to assume greater risk may like to put, say 70% of his cash in equity shares with the expectation of getting, say, 30% dividends on an average (note that this expectation may or may not materialise) and the balance 30% in debentures with a relatively assured return of, say, 14%. And within these broad groups of equity shares and debentures, he may specifically select specific firms, say, debentures of L&T or equity shares of Reliance

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and so on. This problem of specific identification is known as the problem of selectivity. It is obvious that the issue of selectivity will have to be based on micro-level forecasts of expected cashflows from specific shares/debentures of different companies. The investor will use security analysis approaches for this. Then, he must determine the timing of his investment and for this he will have to observe the forecasted price movements of shares relative to debentures at the macro level. Finally, he will make all possible efforts to minimise his risk for a given expected level of average return of his potential portfolio. This he would be able to achieve when the returns of shares and debentures that would comprise his portfolio are not positively correlated to each other. The resultant portfolio would be known as 'diversified' portfolio. Thus, portfolio construction would address itself to three major problems via selectivity, timing, and diversification. The related questions would be: which specific shares/debentures to buy, when to buy, and how best to combine them in a way that risk is reduced to a minimum for a given level of expected return.

4. ***Portfolio Revision:*** As time passes, the investor would discover that securities that once were very attractive have ceased to be so. Also, new securities with promises of high returns and relatively low risk have emerged. In view of such developments it would be necessary for him to review the portfolio. He would liquidate the unattractive securities and acquire the new stars from the market. In a way, he repeats the first three steps of the investment process. He sets a new investment policy, undertakes security analysis afresh, and re-allocates his cash for the new portfolio. It must be observed that the transaction costs incurred in the buy-sell activities relating to the new portfolio and also the extent of improvement expected in the future outlook of new securities would be important considerations in the revision of the given portfolio.

5. ***Portfolio Performance Evaluation:*** A rational investor would constantly examine his chosen portfolio both for average return and risk. Measures, for doing so, must be developed. Also, the calculated risk-return positions must be compared with certain yardsticks or norms.

Did u know? This step in the investment process, acquires considerable significance since the tasks involved are quantitative measurement of actual risk and return their evaluation against objective norms.

Self Assessment

Fill in the blanks:

4. ..... analysis consist of examining the risk-return characteristics of individual securities or groups of securities identified under step one.
5. Under ..... analysis the analyst studies part movements in prices of securities he is interested in, to determine the trends and patterns that repeat themselves.
6. In ..... analysis, analyst works out a true or intrinsic value of a security and compares it with the current market price.
7. Portfolio construction would address itself to three major problems via., selectivity, timing, and .....

1.3 Features of Investments

In choosing specific investments, investors will need definite ideas regarding features which their portfolios should possess. These features should be consistent with the investors' general

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objectives and, in addition, should afford them all the incidental conveniences and advantages which are possible under the circumstances. For evaluation of investment avenue, the following attributes are relevant:

- Returns
- Capital Appreciation
  - Conservation
    - Aggressive growth
    - Speculation
  - Form of return
    - Periodic cash receipts
    - Capital gain
- Safety and security of funds
  - Risk
  - Liquidity
  - Tax considerations
  - Conveyance
  - Concealability
- Safety of Principal

  The safety sought in investment is not absolute or complete; it rather implies protection against loss under reasonably likely conditions or variations.
- Capital Growth

  Capital appreciation has today become an important principle. Recognising the connection between corporation and industry growth and very large capital appreciation, investors and their advisers constantly are seeking "growth stocks".
- Tax Benefits

  To plan an investment programme without regard to one's tax status may be costly to the investor. There are really two problems involved here, one concerned with the amount of income paid by the investment and the other with the burden of income taxes upon that income.
- Concealability

  To be safe from social disorders, government confiscation, or unacceptable levels of taxation, property must be concealable and leave no record of income received from its use or sale. Gold and precious stones have long been esteemed for these purposes.

Caution An investment is a liquid asset if it can be converted into cash without delay at full market value in any quantity. For an investment to be liquid it must be (1) reversible or (2) marketable.

Stability of income must be looked at in different ways just as was security of principal.

1.3.1 Investment Alternatives

Notes

The various investment alternatives are equity, preference shares and debentures.

Bonds or Fixed Income Securities

- Government securities
- Savings bonds
- Private sector debentures
- PSU bonds
- Preference shares

Money Market Instruments

- Treasury bills
- Certificates of deposits
- Commercial paper
- Repos

Non-marketable Financial Assets

- Bank deposits
- Post Office Time Deposits (POTD)
- Monthly Income Scheme of the Post Office (MISPO)
- Kisan Vikas Patra (KVP)
- National Savings Certificate (NSC)
- Company deposits
- Employees provident fund scheme
- Public provident fund scheme

Real Estate

- Residential House
- Sources of Housing Finance
- Features of Housing Loans
- Guidelines for Buying a Flat
- Commercial Property
- Agricultural Land
- Suburban Land
- Time Share in a Holiday Resort

Precious Objects

- Gold and Silver
- Precious Stones
- Art Objects

Notes

Insurance Policies

- Endowment Assurance
- Money Back Plan
- Whole Life Assurance
- Unit Linked Plan
- Term Assurance
- Immediate Annuity
- Deferred Annuity

Self Assessment

Fill in the blanks:

8. Investment features should be ..... with the investors' general objectives.
9. The ..... sought in investment is not absolute or complete; it rather implies protection against loss under reasonably likely conditions or variations.
10. To plan an investment programme without regard to one's ..... status may be costly to the investor.

Caselet

Life Cycle – Saving and Investing

As people move through the stages of the life cycle, their financial goals and investment strategies will change. Savings and investments that are appropriate for a young couple with small children may be inappropriate for a single person approaching retirement. The following case study illustrates possible savings and investment choices for people at various life stages. Ultimately, each person must make decisions and take action in light of unique household situations and current economic conditions. You may use this case study to generates discussion. Possible suggestions for each life cycle stage are given, but participants may generate other excellent ideas.

For Example:

Nathan is 26 years old and is working at his first job out of college. His major expenses are rent for an apartment he shares with his roommate Mike and student loans. He drives an older car that is paid off. He has little money saved for emergencies and would like to travel some day. He became eligible to participate in his company's 401(k) retirement plan January 1, 2003.

Life Stage: Young single adult

Goals: Emergency fund, car, travel

Suggestion:

Nathan could deposit money each payday into an interest bearing savings account at the bank or credit union. To remove the temptation to spend it before he gets to the bank, he should consider automatic payroll deduction. Nathan should save money for relatively

Contd...

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short term goals in a money market mutual fund or insured certificates of deposit, or a diversified mutual fund whose goal is safety as well as growth.

Source: http://www.ag.ndsu.edu/money/documents/basics-savings/Saving%203%20-%20Activity%20Case%20Studies%20-%20Basics%20of%20Saving%20and%20Inv.pdf

1.4 Types of Investors

Investing may look like a jovial, friendly business. The salespeople, the managers, the newsletters and the advertisements all seem deeply and exclusively concerned with your well-being.

It's true that most of the investment industry would like to do something nice for the clients and customers. But in the real world, that pleasant intention is often far from the top of the industry's priority list. The industry is highly organized, highly motivated and highly trained to do whatever it takes to get your money under management.

Indian investors have hung out at the two extreme ends of the risk return matrix – we are usually at zero risk, with sudden spurts of lunacy. What else accounts for the huge retail participation, over the years, in dud IPOs, plantation schemes and the Z category stocks in the markets from a nation of FD-makers and gold buyers? Does that mean that the average middle-class householder has a wild side to his personality? If the latest from 'behavioural finance' (the new economics branch that studies why investors behave the way they do) is true, then yes, he does.

According to Dr Jeff of the University of Melbourne, identifies three broad types of investors found operating in the stock market:

- The contrarians
- Trend followers
- Hedgers and holders.

The 'contrarian' buys when the rest of the world sells. 'Trend followers' are more conservative and tend to invest in products such as bank stocks. The last is the very conservative 'hedger and holder' – the famous 'small investor' of India who wants high return and low risk, preferably guaranteed by the government. Researchers in this field have also found that investor personality may differ across asset classes, with more risks being taken with a more familiar category.

Caution A person comfortable with real estate may take large risks in property, but may want to stick to a diversified equity fund for his stock market exposure. Alternatively, a conservative investor may rank the risk of loss of purchasing power due to inflation lower than the risk of losing money even in a low-risk equity product.

1.4.1 Other Type According to Researcher

1. ***Measured Investor***

   Characteristic

   - The measured investor starts investing early, enjoys investing and is happy with his or her current financial situation.

   Strengths

   - Regularly rebalances his or her portfolio.

Notes

- Invests regularly.
- Avoids concentration in a single investment.
- Is committed to an investing plan.

Weaknesses

- Holds losers too long.
- Does not take profits.

2. ***Reluctant Investor***

Characteristic

- The reluctant investor does not enjoy investing and prefers to spend as little time as possible on his or her investments. However, the reluctant investor is confident that he or she will have a comfortable retirement.

Strengths

- Gets rid of investments that are losing.
- Avoids concentration of portfolio in a single investment.
- Does not chase 'hot' investments.

Weaknesses

- Invests too little and too late.
- Does not invest regularly, even if he or she has the money to do so.
- Does not regularly rebalance his or her portfolio.

3. ***Competitive Investor***

Characteristic

- The competitive investor enjoys investing, but makes a habit of trying to beat the market. This investor is happy with his or her current situation and is confident about the future.

Strengths

- Invests regularly.
- Starts investing early.
- Puts as much money as possible into his or her investments.
- Regularly rebalances his or her portfolio.

Weaknesses

- Holds losers too long and does not take profits.
- Fails to adequately diversify his or her investments.
- Is over-confident and chases 'hot' investments.

Notes

4. ***Unprepared Investor***

Characteristic

- The unprepared investor tends to put off investing. This investor is not happy with his or her current financial situation and prospects for a secure retirement, and lacks confidence in his or her investment ability.

Strengths

- Understands the importance of investing and is willing to learn — even though he or she can be a slow starter.

Weaknesses

- Invests too little, too late and not regularly.
- Holds losers too long.
- Ignores taxes and expenses.
- Often concentrates too much money in a single investment.
- Does not regularly rebalance his or her portfolio.

Managing Director of the Pune based Sardesai Finance talks about the different kinds of investors he has come across in his planning practices:

1. ***Trustful:*** These investors typically are professionals such as doctors. They are aware that they do not understand the field of finance and hence seek a knowledgeable financial planner. Thereafter, they place their trust in the planners and their freedom.

   Returns: Generally, have had poorly performing investments before visiting the financial planner and are happy to have reasonably performing investments.

2. ***Knowledgeable:*** These investors tend to be up to speed on all financial aspects of their life. They seek help mainly with a view to enhance their returns. Such investors like to take on above-average risk and are active themselves in stock selection.

   Returns: They want high returns — much above average. They don't necessarily achieve these since they tend to lack patience and their over enthusiasm in making changes tends to set them back.

3. ***Distrustful Wanderer:*** This is a difficult investor to deal with. He or she has half-knowledge and gets this knowledge from tips and gossip. They are generally distrustful of even the financial planner. They move from one financial advisor to another.

   Returns: They want to get better returns than their peers but lack the understanding of risk. Usually don't get anywhere financially.

4. ***Long-Termers:*** These investors spend time and energy understanding their investments and are willing to pay for sound financial advice. They are investing for the long-term after understanding the risk-reward equation. They are much disciplined, set their long-term objectives and work with the financial planners to achieve it. Within this category there are two types of people:

   (i) *Conservatives:* They are risk averse and tend to shy away from equities.

   (ii) *Liberals:* They are willing to invest in equities with a long-term view and are not bothered by short-term fluctuation.

   Returns: They achieve their financial goals and are not bothered by what the others are doing. The liberals tend to achieve the goals more comfortably than the conservatives.

Notes

1.4.2 According to a New Study

Your personality is losing your money – not the market. All investors make mistakes; it is all part of the learning process. That is a given. But what isn't so obvious is that an investor's personality has a big hand in determining what investing mistakes he or she is most likely to make. That was a key finding of a study done by the research firm of Mathew Greenwald & Associates Inc. for Merrill Lynch investment managers. Merrill divided the investors into four distinct personality types. See if you can find a match for yours…..

Measured Investors

Measured investors are secure in their financial situation and confident they will have a comfortable retirement. These investors are least likely to say they waited too long to start investing or that they haven't invested enough. Moreover, they are least likely to be plagued by emotions such as fear and anxiety that commonly cause investment mistakes. The most common mistake is not letting go of losing investments.

Reluctant Investors

Reluctant investors don't particularly enjoy investing and prefer to spend as little time as possible managing their holdings. Not surprisingly, this group is the most likely to have a financial adviser. Reluctant investors are least likely to become overly attached to an investment or to put too much money into a single holding.

Competitive Investors

Competitive investors can have a hard time letting go of losing investments, often dedicate too much of their portfolio to one stock or investment and tend to be greedy and chase hot stocks. Competitive investors enjoy investing, are informed and try to beat the market.

Notes They are most likely to have started investing early, to put enough money into their investments and to invest regularly. On the downside, their enthusiasm for investing "can be a detriment if left unchecked".

Unprepared Investors

Unprepared investors, characterized as unhappy with their financial situation and lacking in confidence. They tend to start investing late and are the least likely to rebalance their portfolios. The survey involved 1,000 Indian investors who had annual household income of at least 275,000 (INR) and at least 100,000 in assets to invest. When asked for the reasons they make mistakes, 64% said they just happen.

Self Assessment

Fill in the blanks:

11. The ..... investor does not enjoy investing and prefers to spend as little time as possible on his or her investments.
12. ..... investors spend time and energy understanding their investments and are willing to pay for sound financial advice.

Notes

13. ..... are willing to invest in equities with a long-term view and are not bothered by short-term fluctuation.

14. .....investors tend to be up to speed on all financial aspects of their life. They seek help mainly with a view to enhance their returns.

15. ..... investors are most likely to have started investing early, to put enough money into their investments and to invest regularly.

Task Conduct a survey by getting a questionnaire filled by various investors on the type of investment product they invest into and the duration of their investments.

Case Study

A Long Time Ago when I was a Kid

On one sunny day that I still have fond memories of my father came home in the evening with a toy pig. I turned it around and discovered that it had a hole in its back. My dad announced that it was my 'Piggy Bank'.

He fished out a 05 paise coin from his pocket and instructed me to put it through the hole in the pig's back. I did it eagerly, expecting the pig to start walking. It didn't walk but my father patted me on my back and said,

"Son, this is your first saving. I will give you 05 paise everyday and when we have collected ₹ 50 we will go to the bank and get you a savings account."

Savings! Suddenly a new activity had begun in my life that I understood nothing about. My Dad noticed the puzzled look on my face. He scratched his head and suddenly a meaningful look came in his eyes. I think he remembered the ant menace that my mom had been complaining of for the past few days. He showed me the ants that were carrying grains in a line to their hiding place.

"The ants are carrying grains and saving it for a rainy day," he said. He took out my World Book Encyclopaedia and showed me various other animals that save food for a time when they may need it.

"You know that I go to office to earn money for all of us. But when I turn 58 years, I will have to retire and stop going to office. We will need money to buy food and clothing even after I retire from my job and stop earning. I need to save now, so that I can pay for our food and clothing later."

He explained.

"Similarly, you can save the money I give you now to buy a good book or a paint box later," he impressed upon me.

That was my first lesson in 'saving'.

A few years later I learnt in my class that all of us have two choices. We can consume now or can consume later. Hence, savings is just postponing consumption.

Does it then mean that only what we consciously keep aside for a rainy days is called "saving"?

Contd...

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"No, whatever you do not manage to consume and stays as a surplus is also 'saving'. But that is a lucky state to be in," my teacher responded.

"And that set me thinking...

If I can 'save' to consume at a later date, I can also spend more now if I know that I can earn enough surplus to pay for it later..."

Just then my teacher's booming voice interrupted my train of thoughts... "Borrowing is the opposite of saving," she announced. Now that was easy to visualize.

I had a classmate who was fairly irregular to class, spent a lot of time in the school canteen and supposedly even bunked classes to watch the 'matinee'. How did he manage to pay for all his nefarious activities? Well, he used to borrow money from a few friends of mine who saved their pocket money. During the break, I manage to accost one of those friends who had lent money to my classmate.

"I can understand why Ramesh (by the way that was my classmate's name) borrows from you. But why do you lend him money? Can he pay back?"

"Look, I don't really intend to spend all my pocket money. I am saving up for a new cycle. Money always burns a hole in my pocket. Hence, I lend it to him," he answered.

"Ramesh has a rich father, who is a family friend," he explained. "I know that I can get my money back. Ramesh also knows that when he turns 18 he will look after his family business and earn well. And then he will have no time to have the fun he is having now. Hence, he borrows to spend," he added.

Learning for me again.

'Saving' is not consuming everything today and leaving something for tomorrow, whereas 'borrowing' is consuming more than what one has today, expecting to save more later to pay up for the excess consumption now.

While 'saving' is being conservative and wise, 'borrowing' is being risky and foolish unless for a basic need. Hence, it makes sense to borrow only when one is sure that in the future he will be able to save enough not only to pay up for his borrowings but also to see him through the days when he cannot earn.

What is 'investing' then?

This question bothered me till I had my first mug of beer from some bottles that we had smuggled in from my friend's place (it belonged to his father who owned a liquor shop).

Oh boy! I loved it so much, the beer I mean. But soon an idea suggested itself to me. If everybody starts liking it, the demand for beer is definitely going to rise. The growing population will ensure that the demand sustains. Wouldn't then it make a lot of sense to set up a company to manufacture beer? If demand drops then my friends and I can very well step in! I had grown up finally from the days of aspiring to be a bus conductor to wanting to own a beer factory now!

The next day, I started discussing my ambition with my friend's father. During the course of our conversation, I learnt of the money needed to buy the fermenting equipment that can produce beer for years to come.

By selling all the beer that can be manufactured, I can recover the initial money spent on the business by the end of three years. Beyond that, the money that I'll make will be surplus. That would be an awful lot of money.

Contd...

Notes

Of course, I remembered that as 'Investment' from my economics textbook.

In other words, 'investing' means building up to meet future consumption demand with the intention of making surpluses or profits, as they are popularly known.

Investments are risky, true, what if tomorrow everybody decides that 'beer' is yuck. Maybe the government will ban beer consumption. Or your plant might develop a big problem for all you know. Hence, there has to be a reasonable profit expectation to motivate an investment. Also, when you or I 'invest', we forego our present consumption or do it out of our surplus. In other words, 'savings' again supports 'investment'. Interesting, isn't it?

We started with three things that looked as different as chalk, brick and wood, but discovered that the three ('saving', 'borrowing' and 'investing') are related. But then, I have a few questions in my mind already. I am sure you would have some too. What if I save ₹ 500 over five months to buy a cycle and the price of the cycle shoots up by 20% by then? I am losing the 'purchasing power' of my ₹ 500. Is there some way I can make up for the risk of losing my purchasing power?

Getting a little complicated for now. Let us unravel it later.

Questions:

1. What does investing means?
2. From the case discussed what difference can you find between savings and investment?

Source: Security Analysis and Portfolio Management, Sudhindra Bhat, Excel Books, (2008)

1.5 Summary

- Security analysis and portfolio management are emerging as a widely practised profession and an extensively researched theoretical domain.
- The foundation of the basic knowledge in the area foes to the basic concept of investment.
- An individual who saves operates under the stimulus of expanded future wealth. This makes him forego current consumption and apply the resources saved to avenues which add to his wealth at a future moment.
- The fundamental investment decision is never on the limitless pursuit of extraordinary wealth. This would never be possible as the investor would be exposed to tremendous risk. Much of what he invests would, therefore, be a trade-off between risk and return.
- A recent development in investment management is the perception of an investor that he/she would not hold an asset in isolation. The portfolio is his major concern.
- Portfolio management acquires an added significance in a dynamic investment environment.
- Many new and innovative instruments are opening up as investment alternatives. A number of specialised institutions are emerging. And the nucleus and the reach of organised securities markets are being extended.
- Regulatory mechanisms are being streamlined and rationalised. The corporate sector appears abuzz with activity now when the era of the de-regulation has been opened up. All these add up to a scenario when investment is accelerated and trading systems strained. These appear to be the future challenges of investment management.

Notes

1.6 Keywords

Distrustful Wanderer: This is a difficult investor to deal with. He or she has half-knowledge and gets this knowledge from tips and gossip.

Financial Planning: This is the process of meeting your life goals through the proper management of your finances.

Fundamental Analysis: The analyst here works out a true or intrinsic value of a security and compares it with the current market price.

Liberals: They are willing to invest in equities with a long-term view and are not bothered by short-term fluctuation.

Long-termers: These investors spend time and energy understanding their investments and are willing to pay for sound financial advice. They are investing for the long-term after understanding the risk-reward equation.

Portfolio Construction: This consists of identifying the specific securities in which to invest and determining the proportion of the investor's wealth to be invested in each.

Security Analysis: It consists of examining the risk-return characteristics of individual securities or groups of securities identified under step one.

Technical Analysis: The analyst here studies part movements in prices of securities he is interested in, to determine the trends and patterns that repeat themselves.

1.7 Review Questions

1. Define the term 'investment' as it relates to securities investment.
2. Write the nature of investment.
3. Write and illustrate the step-by-step process of investment.
4. Write attributes/factors of investment.
5. Outline the reasons for the emerging popularity of investment in today's world.
6. "Investment is well-grounded and carefully planned speculation". In the light of the above statement, explain and differentiate between 'investment' and 'speculation'. How do they differ from 'gambling'?
7. As an investment advisor, what features would you suggest to be included in the investment bunch of a client? Explain these features briefly.
8. "No investment is risk-free". In view of the above statement, write an essay on the meaning and types of investment- risk. Can this risk be eliminated or minimized?
9. Write a brief note on different types of investors.
10. What are the different avenues of investment? Explain each one of them in detail.

Answers: Self Assessment

1.	Financial planning	2.	Investment
3.	Risk	4.	Security Analysis
5.	Technical	6.	Fundamental

Notes

7. Diversification
8. Consistent
9. Safety
10. Tax
11. Reluctant
12. Long-termers
13. Liberals
14. Knowledgeable
15. Competitive

1.8 Further Readings

Books

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Coates, Robert C: Investment Strategy, McGraw-Hill, 1978.

Online links

http://stock-market-basics.superiorinvestor.net/investment-management/investment-management.html

http://www.resbank.co.za/aboutus/departments/sarbcollege/documents/introduction%20to%20investment%20management.pdf

http://www.narachinvestment.com/introduction.htm

http://www.moneysense.gov.sg/understanding-financial-products/investments/types-of-investments.aspx

Notes

Unit 2: Securities Market: An Overview

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Objectives

After studying this unit, you will be able to:

- Explain products, participants and functions
- Discuss securities market and financial system
- Elaborate regulatory framework
- Discuss screen based trading

Introduction

The securities markets in India have witnessed several policy initiatives, which have refined the market micro-structure, modernised operations and broadened investment choices for the investors. The irregularities in the securities transactions in the last quarter of 2000-01, hastened the introduction and implementation of several reforms. While a Joint Parliamentary Committee was constituted to go into the irregularities and manipulations in all their ramifications in all transactions relating to securities, decisions were taken to complete the process of demutualisation and corporatisation of stock exchanges to separate ownership, management and trading rights on stock exchanges and to effect legislative changes for investor protection, and to enhance the effectiveness of SEBI as the capital market regulator. Rolling settlement on T+5 basis was introduced in respect of most active 251 securities from July 2, 2001 and in respect of balance securities from 31st December 2001. Rolling settlement on T+3 basis commenced for all listed securities from April 1, 2002 and subsequently on T+2 basis from April 1, 2003.

The derivatives trading on the NSE commenced with the S&P CNX Nifty Index Futures on June 12, 2000. The trading in index options commenced on June 4, 2001 and trading in options on

Notes

individual securities commenced on July 2, 2001. Single stock futures were launched on November 9, 2001. Due to rapid changes in volatility in the securities market from time to time, there was a need felt for a measure of market volatility in the form of an index that would help the market participants. NSE launched the India VIX, a volatility index based on the S&P CNX Nifty Index Option prices. Volatility Index is a measure of market's expectation of volatility over the near term.

The Indian stock market regulator, Securities & Exchange Board of India (SEBI) allowed the Direct Market Access (DMA) facility to investors in India on April 3, 2008.

To begin with, DMA was extended to the institutional investors. In addition to the DMA facility, SEBI also decided to permit all classes of investors to short sell and the facility for securities lending and borrowing scheme was operationalised on April 21, 2008.

The Debt markets in India have also witnessed a series of reforms, beginning in the year 2001-02 which was quite eventful for debt markets in India, with implementation of several important decisions like setting up of a clearing corporation for government securities, a negotiated dealing system to facilitate transparent electronic bidding in auctions and secondary market transactions on a real time basis and dematerialisation of debt instruments. Further, there was adoption of modified Delivery-versus-Payment mode of settlement (DvP III in March 2004). The settlement system for transaction in government securities was standardized to T+1 cycle on May 11, 2005. To provide banks and other institutions with a more advanced and more efficient trading platform, an anonymous order matching trading platform (NDS-OM) was introduced in August 2005. Short sale was permitted in G-secs in 2006 to provide an opportunity to market participants to manage their interest rate risk more effectively and to improve liquidity in the market. 'When issued' (WI) trading in Central Government Securities was introduced in 2006.

Did u know? As a result of the gradual reform process undertaken over the years, the Indian G-Sec market has become increasingly broad-based and characterized by an efficient auction process, an active secondary market, electronic trading and settlement technology that ensure safe settlement with Straight Through Processing (STP).

This unit, however, takes a review of the stock market developments since 1990. These developments in the securities market, which support corporate initiatives, finance the exploitation of new ideas and facilitate management of financial risks, hold out necessary impetus for growth, development and strength of the emerging market economy of India.

Task Go to website https://www.ccilindia.com/.../NDSOMTradeAnalysisReport.aspx - and collect information on Trade analysis.

2.1 Products, Participants and Functions

Transfer of resources from those with idle resources to others who have a productive need for them is perhaps most efficiently achieved through the securities markets. Stated formally, securities markets provide channels for reallocation of savings to investments and entrepreneurship 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.

Savings are linked to investments by a variety of intermediaries through a range of complex financial products called "securities" which is defined in the Securities Contracts (Regulation)

Notes

Act, 1956 to include: shares, scrips, stocks, bonds, debentures, debenture stock or other marketable securities of a like nature in or of any incorporated company or body corporate; derivatives; units of any other instrument issued by any collective investment scheme to the investors in such schemes; security receipt as defined in clause (zg) of section 2 of the Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002; units or any other such instrument issued to the investors under any mutual fund scheme; any certificate or instrument (by whatever name called), issued to an investor by any issuer being a special purpose distinct entity which possesses any debt or receivable, including mortgage debt, assigned to such entity, and acknowledging beneficial interest of such investor in such debt or receivable, including mortgage debt, as the case may be; government securities. Such other instruments as may be declared by the Central Government to be securities; and rights or interest in securities.

There are a set of economic units who demand securities in lieu of funds and others who supply securities for funds. These demand for and supply of securities and funds determine, under competitive market conditions in both goods and securities market, the prices of securities which reflect the present value of future prospects of the issuer, adjusted for risks and also prices of funds.

It is not that the users and suppliers of funds meet each other and exchange funds for securities. It is difficult to accomplish such double coincidence of wants. The amount of funds supplied by the supplier may not be the amount needed by the user. Similarly, the risk, liquidity and maturity characteristics of the securities issued by the issuer may not match preference of the supplier. In such cases, they incur substantial search costs to find each other. Search costs are minimised by the intermediaries who match and bring the suppliers and users of funds together. These intermediaries may act as agents to match the needs of users and suppliers of funds for a commission, help suppliers and users in creation and sale of securities for a fee or buy the securities issued by users and in turn, sell their own securities to suppliers to book profit. It is, thus, a misnomer that securities market disintermediates by establishing a direct relationship between the savers and the users of funds. The market does not work in a vacuum; it requires services of a large variety of intermediaries. The disintermediation in the securities market is in fact an intermediation with a difference; it is a risk-less intermediation, where the ultimate risks are borne by the savers and not the intermediaries. A large variety and number of intermediaries provide intermediation services in the Indian securities market as may be seen from Table 2.1.

Table 2.1: Market Participants in Securities Market

Market Intermediaries	2008-09	2009-10	2010-11
Securities Appellate Tribunal	1	1	1
Regulators*	4	4	4
Depositories	2	2	2
Stock Exchanges			
Cash Market Segment	19	19	19
Debt Market Segment	2	2	2
Derivative Market Segment	2	2	2
Currency Derivatives Segment	3	4	4
Brokers (Cash Segment)	9,628	9,772	10,203
Corporate Brokers (Cash Segment)	4,079	4,194	4,774
Brokers (Derivatives)	1,587	1,705	2,111
Brokers (Currency Derivatives)	1,154	1,459	2,008

Contd...

Notes

Sub-brokers (Cash Segment)	62,471	75,378	83,808
Foreign Institutional Investors	1,635	1,713	1,722
Portfolio Managers	232	243	267
Custodians	16	17	17
Registrars to an Issue & Share Transfer Agents	71	74	73
Merchant Bankers	134	164	192
Bankers to an Issue	51	48	55
Debenture Trustees	30	30	29
Underwriters	19	5	3
Venture Capital Funds	132	158	184
Foreign Venture Capital Investors	129	143	153
Mutual Funds	44	47	51
Collective Investment Schemes	1	1	1

* DCA, DEA, RBI & SEBI.

Source: *SEBI Bulletin,* February 2012

The securities market, thus, has essentially three categories of participants, namely the issuers of securities, investors in securities and the intermediaries. The issuers and investors are the consumers of services rendered by the intermediaries while the investors are consumers (they subscribe for and trade in securities) of securities issued by issuers. In pursuit of providing a product to meet the needs of each investor and issuer, the intermediaries churn out more and more complicated products. They educate and guide them in their dealings and bring them together. Those who receive funds in exchange for securities and those who receive securities in exchange for funds often need the reassurance that it is safe to do so. This reassurance is provided by the law and by custom, often enforced by the regulator. The regulator develops fair market practices and regulates the conduct of issuers of securities and the intermediaries so as to protect the interests of suppliers of funds. The regulator ensures a high standard of service from intermediaries and supply of quality securities and non-manipulated demand for them in the market.

Self Assessment

Fill in the blanks:

1. ..... of resources from those with idle resources to others who have a productive need for them is perhaps most efficiently achieved through the securities markets.
2. Securities markets provide channels for reallocation of savings to investments and entrepreneurship and thereby ..... these two activities.
3. There are a set of economic units who demand securities in lieu of funds and others who supply ..... for funds.
4. The amount of funds supplied by the ..... may not be the amount needed by the .....
5. The risk, liquidity and maturity characteristics of the securities issued by the issuer may not match ..... of the supplier.

Notes

Caselet

Reforms at Bombay Stock Exchange, Asia's Oldest Stock Exchange: The Competitive Strategies

The Bombay Stock Exchange (BSE), which is the largest stock exchange in Asia, witnessed a profound transformation in its business operations. From being a regional stock exchange, it has emerged as one of the important institutions for transferring savings into investments, in the country. Between 1990 and 2003, BSE witnessed a series of stock market scams, which involved more than 5,000 rupee crores of investors' money. BSE faced criticism from industry experts, analysts, policy makers and politicians for being non-transparent, unregulated and taking inadequate measures for investors' protection. To overcome these challenges, BSE launched a series of measures in the late 1990s and with the advent of reforms, BSE witnessed notable developments in many areas such as: (1) trading; (2) operations; (3) management; and (4) addressing investors' grievances. The Government of India also took steps to corporatise the stock exchange, thereby separating trading, ownership and management. Finally, on the August 9, 2005, BSE created history by converting itself into a corporate entity, thereby forming BSE Limited.

Source: http://www.ibscdc.org/Case_Studies/Strategy/Corporate%20Strategy/COS0064.htm

2.2 Securities Market and Financial System

The securities market has two interdependent and inseparable segments, the new issues (primary market) and the stock (secondary) market.

2.2.1 Primary Market

The primary market provides the channel for sale of new securities. Primary market provides opportunity to issuers of securities; government as well as corporates, to raise resources to meet their requirements of investment and/or discharge some obligation.

They may issue the securities at face value, or at a discount/premium and these securities may take a variety of forms such as equity, debt, etc. They may issue the securities in domestic market and/or international market.

The primary market issuance is done either through public issues or private placement. A public issue does not limit any entity in investing while in private placement, the issuance is done to select people. In terms of the Companies Act, 1956, an issue becomes public if it results in allotment to more than 50 persons. This means an issue resulting in allotment to less than 50 persons is private placement. There are two major types of issuers who issue securities. The corporate entities issue mainly debt and equity instruments (shares, debentures, etc.), while the governments (central and state governments) issue debt securities (dated securities, treasury bills).

Did u know? The price signals, which subsume all information about the issuer and his business including associated risk, generated in the secondary market, help the primary market in allocation of funds.

Notes

2.2.2 Secondary Market

Secondary market refers to a market where securities are traded after being initially offered to the public in the primary market and/or listed on the Stock Exchange. Majority of the trading is done in the secondary market. Secondary market comprises of equity markets and the debt markets.

The secondary market enables participants who hold securities to adjust their holdings in response to changes in their assessment of risk and return. They also sell securities for cash to meet their liquidity needs. The secondary market has further two components, namely the Over-the-Counter (OTC) market and the exchange-traded market. OTC is different from the market place provided by the Over the Counter Exchange of India Limited. OTC markets are essentially informal markets where trades are negotiated. Most of the trades in government securities are in the OTC market. All the spot trades where securities are traded for immediate delivery and payment take place in the OTC market. The exchanges do not provide facility for spot trades in a strict sense. Closest to spot market is the cash market where settlement takes place after some time. Trades taking place over a trading cycle, i.e. a day under rolling settlement, are settled together after a certain time (currently two working days). Trades executed on the National Stock Exchange of India Limited (NSE) are cleared and settled by a clearing corporation which provides novation and settlement guarantee. Nearly 100% of the trades settled by delivery are settled in demat form. NSE also provides a formal trading platform for trading of a wide range of debt securities including government securities.

A variant of secondary market is the forward market, where securities are traded for future delivery and payment. Pure forward is out side the formal market. The versions of forward in formal market are futures and options. In futures market, standardised securities are traded for future delivery and settlement. These futures can be on a basket of securities like an index or an individual security. In case of options, securities are traded for conditional future delivery. There are two types of options – a put option permits the owner to sell a security to the writer of options at a predetermined price while a call option permits the owner to purchase a security from the writer of the option at a predetermined price. These options can also be on individual stocks or basket of stocks like index. Two exchanges, namely NSE and the Bombay Stock Exchange, (BSE) provide trading of derivatives of securities.

The past few years in many ways have been remarkable for securities market in India. It has grown exponentially as measured in terms of amount raised from the market, number of stock exchanges and other intermediaries, the number of listed stocks, market capitalisation, trading volumes and turnover on stock exchanges, and investor population. Along with this growth, the profiles of the investors, issuers and intermediaries have changed significantly. The market has witnessed fundamental institutional changes resulting in drastic reduction in transaction costs and significant improvements in efficiency, transparency and safety.

Reforms in the securities market, particularly the establishment and empowerment of SEBI, market determined allocation of resources, screen based nation-wide trading, dematerialisation and electronic transfer of securities, rolling settlement and ban on deferral products, sophisticated risk management and derivatives trading, have greatly improved the regulatory framework and efficiency of trading and settlement. Indian market is now comparable to many developed markets in terms of a number of qualitative parameters.

Stock Market Indicators

The most commonly used indicator of stock market development is the size of the market measured by stock market capitalization (the value of listed shares on the country's exchanges) to GDP ratio. This ratio has improved significantly in India in recent years. At the end of the year

Notes

2001, the market capitalization ratio stood at 23.1 and this has significantly increased to 64.26% at the end of September 2011.

Similarly, the liquidity of the market can be gauged by the turnover ratio which equals the total value of shares traded on a country's stock exchange divided by stock market capitalization. Turnover Ratio is a widely used measure of trading activity and measures trading relative to the size of the market.

Did u know? As per the Standard and Poor's Global Stock Market Fact Book 2011, India ranked 7th in terms of Market Capitalization and 10th in terms of Total Traded Value in stock exchanges.

2.2.3 Derivatives Market

Trading in derivatives of securities commenced in June 2000 with the enactment of enabling legislation in early 2000. Derivatives are formally defined to include: (a) a security derived from a debt instrument, share, loan whether secured or unsecured, risk instrument or contract for differences or any other form of security, and (b) a contract which derives its value from the prices, or index of prices, or underlying securities. Derivatives trading in India are legal and valid only if such contracts are traded on a recognised stock exchange, thus precluding OTC derivatives.

Derivatives trading commenced in India in June 2000 after SEBI granted the approval to this effect in May 2000. SEBI permitted the derivative segment of two stock exchanges, i.e. NSE and BSE, and their clearing house/corporation to commence trading and settlement in approved derivative contracts.

Example: To begin with, SEBI approved trading in index futures contracts based on S&P CNX Nifty Index and BSE-30 (Sensex) Index. This was followed by approval for trading in options based on these two indices and options on individual securities. The derivatives trading on the NSE commenced with S&P CNX Nifty Index futures on June 12, 2000. The trading in S&P CNX Nifty Index options commenced on June 4, 2001 and trading in options on individual securities commenced on July 2, 2001. Single stock futures were launched on November 9, 2001. In June 2003, SEBI-RBI approved the trading on interest rate derivative instruments.

The Mini derivative Futures & Options contract on S&P CNX Nifty was introduced for trading on January 1, 2008 while the long term option contracts on S&P CNX Nifty were introduced for trading on March 3, 2008.

Self Assessment

State whether the following statements are True or False

6. Trading in derivatives of securities commenced in June 2005 with the enactment of enabling legislation in early 2000.
7. Derivatives are formally defined to include a security derived from a debt instrument, share, loan whether secured or unsecured, risk instrument or contract for differences or any other form of security.
8. Derivatives trading in India are legal and valid only if such contracts are traded on a recognised stock exchange, thus precluding OTC derivatives.

Notes

9. SEBI permitted the derivative segment of two stock exchanges, i.e. NSE and BSE, and their clearing house/corporation to commence trading and settlement in approved derivative contracts.

10. Single stock futures were launched on November 9, 2001.

2.3 Regulatory Framework

The five main legislations governing the securities market are: (a) the SEBI Act, 1992 which established SEBI to protect investors and develop and regulate securities market; (b) the Companies Act, 1956, which sets out the code of conduct for the corporate sector in relation to issue, allotment and transfer of securities, and disclosures to be made in public issues; (c) the Securities Contracts (Regulation) Act, 1956, which provides for regulation of transactions in securities through control over stock exchanges; (d) the Depositories Act, 1996 which provides for electronic maintenance and transfer of ownership of demat securities; and (e) the Prevention of Money Laundering Act, 2002 which prevents money laundering and provides for confiscation of property derived from or involved in money laundering.

2.3.1 Legislations

Capital Issues (Control) Act, 1947: The Act had its origin during the war in 1943 when the objective was to channel resources to support the war effort. It was retained with some modifications as a means of controlling the raising of capital by companies and to ensure that national resources were channelled into proper lines, i.e. for desirable purposes to serve goals and priorities of the government, and to protect the interests of investors. Under the Act, any firm wishing to issue securities had to obtain approval from the Central Government, which also determined the amount, type and price of the issue. As a part of the liberalisation process, the Act was repealed in 1992 paving way for market determined allocation of resources.

SEBI Act, 1992: The SEBI Act, 1992 was enacted to empower SEBI with statutory powers for (a) protecting the interests of investors in securities, (b) promoting the development of the securities market, and (c) regulating the securities market. Its regulatory jurisdiction extends over corporates in the issuance of capital and transfer of securities, in addition to all intermediaries and persons associated with securities market. It can conduct enquiries, audits and inspection of all concerned and adjudicate offences under the Act. It has powers to register and regulate all market intermediaries and also to penalise them in case of violations of the provisions of the Act, Rules and Regulations made there under. SEBI has full autonomy and authority to regulate and develop an orderly securities market.

Securities Contracts (Regulation) Act, 1956: It provides for direct and indirect control of virtually all aspects of securities trading and the running of stock exchanges and aims to prevent undesirable transactions in securities. It gives Central Government regulatory jurisdiction over (a) stock exchanges through a process of recognition and continued supervision, (b) contracts in securities, and (c) listing of securities on stock exchanges. As a condition of recognition, a stock exchange complies with conditions prescribed by Central Government. Organised trading activity in securities takes place on a specified recognised stock exchange. The stock exchanges determine their own listing regulations which have to conform to the minimum listing criteria set out in the Rules.

Depositories Act, 1996: The Depositories Act, 1996 provides for the establishment of depositories in securities with the objective of ensuring free transferability of securities with speed, accuracy and security by (a) making securities of public limited companies freely transferable subject to certain exceptions; (b) dematerialising the securities in the depository mode; and (c) providing for maintenance of ownership records in a book entry form. In order to streamline the settlement

Notes

process, the Act envisages transfer of ownership of securities electronically by book entry without making the securities move from person to person. The Act has made the securities of all public limited companies freely transferable, restricting the company's right to use discretion in effecting the transfer of securities, and the transfer deed and other procedural requirements under the Companies Act have been dispensed with.

Companies Act, 1956: It deals with issue, allotment and transfer of securities and various aspects relating to company management. It provides for standard of disclosure in public issues of capital, particularly in the fields of company management and projects, information about other listed companies under the same management, and management perception of risk factors. It also regulates underwriting, the use of premium and discounts on issues, rights and bonus issues, payment of interest and dividends, supply of annual report and other information.

Prevention of Money Laundering Act, 2002: The primary objective of the Act is to prevent money-laundering and to provide for confiscation of property derived from or involved in money-laundering. The term money-laundering is defined as whoever acquires, owns, possess or transfers any proceeds of crime; or knowingly enters into any transaction which is related to proceeds of crime either directly or indirectly or conceals or aids in the concealment of the proceeds or gains of crime within India or outside India commits the offence of money-laundering. Besides providing punishment for the offence of money-laundering, the Act also provides other measures for prevention of Money Laundering. The Act also casts an obligation on the intermediaries, banking companies, etc. to furnish information, of such prescribed transactions to the Financial Intelligence Unit, India, to appoint a principal officer, to maintain certain records, etc.

2.3.2 Rules, Regulations and Regulators

The Government has framed rules under the SCRA, SEBI Act and the Depositories Act. SEBI has framed regulations under the SEBI Act and the Depositories Act for registration and regulation of all market intermediaries, and for prevention of unfair trade practices, insider trading, etc. Under these Acts, Government and SEBI issue notifications, guidelines, and circulars which need to be complied with by market participants. The SROs like stock exchanges have also laid down their rules and regulations.

The absence of conditions of perfect competition in the securities market makes the role of regulator extremely important. The regulator ensures that the market participants behave in a desired manner so that securities market continues to be a major source of finance for corporate and government and the interest of investors are protected.

The responsibility for regulating the securities market is shared by Department of Economic Affairs (DEA), Department of Company Affairs (DCA), Reserve Bank of India (RBI) and SEBI. The orders of SEBI under the securities laws are appellable before a Securities Appellate Tribunal (SAT).

Most of the powers under the SCRA are exercisable by DEA while a few others by SEBI. The powers of the DEA under the SCRA are also con-currently exercised by SEBI. The powers in respect of the contracts for sale and purchase of securities, gold related securities, money market securities and securities derived from these securities and ready forward contracts in debt securities are exercised concurrently by RBI. The SEBI Act and the Depositories Act are mostly administered by SEBI. The rules under the securities laws are framed by government and regulations by SEBI. All these are administered by SEBI. The powers under the Companies Act relating to issue and transfer of securities and non-payment of dividend are administered by SEBI in case of listed public companies and public companies proposing to get their securities listed. The SROs ensure compliance with their own rules as well as with the rules relevant for them under the securities laws.

Notes

2.3.3 Reforms Since 1990s

Corporate Securities Market

With the objectives of improving market efficiency, enhancing transparency, preventing unfair trade practices and bringing the Indian market up to international standards, a package of reforms consisting of measures to liberalise, regulate and develop the securities market was introduced. The practice of allocation of resources among different competing entities as well as its terms by a central authority was discontinued. The issuers complying with the eligibility criteria were allowed freedom to issue the securities at market determined rates. The secondary market overcame the geographical barriers by moving to screen based trading. Trades enjoyed counter-party guarantee. The trading cycle shortened to a day and trades are settled within two working days, while all deferral products were banned. Physical security certificates almost disappeared. A variety of derivative products were permitted. The following paragraphs discuss the principal reform measures undertaken since 1992.

SEBI Act, 1992: It created a regulator (SEBI), empowered it adequately and assigned it with the responsibility for (a) protecting the interests of investors in securities, (b) promoting the development of the securities market, and (c) regulating the securities market. Its regulatory jurisdiction extends over corporates in the issuance of capital and transfer of securities, in addition to all intermediaries and persons associated with securities market. All market intermediaries are registered and regulated by SEBI. They are also required to appoint a compliance officer who is responsible for monitoring compliance with securities laws and for redressal of investor grievances. The courts have upheld the powers of SEBI to impose monetary penalties and to levy fees from market intermediaries.

Enactment of SEBI Act is the first attempt towards integrated regulation of the securities market. SEBI was given full authority and jurisdiction over the securities market under the Act, and was given concurrent/delegated powers for various provisions under the Companies Act and the SC(R)A. Many provisions in the Companies Act having a bearing on securities market are administered by SEBI. The Depositories Act, 1996 is also administered by SEBI.

SEBI Issue of Capital and Disclosure Requirements (ICDR) Regulations 2009: The SEBI (Issue of Capital and Disclosure Requirements) Regulation, 2009 are applicable for public issue; rights issue, preferential issue; an issue of bonus shares by a listed issuer; qualified institutions placement by a listed issuer and issue of Indian Depository Receipts.

Caution The issuer should appoint one or more merchant bankers, at least one of whom should be a lead merchant banker.

The issuer should also appoint other intermediaries, in consultation with the lead merchant banker, to carry out the obligations relating to the issue. The issuer should in consultation with the lead merchant banker, appoint only those intermediaries which are registered with SEBI. Where the issue is managed by more than one merchant banker; the rights, obligations and responsibilities, relating inter alia to disclosures, allotment, refund and underwriting obligations, if any, of each merchant banker should be predetermined and disclosed in the offer document. The issuer determines the price of the equity shares and convertible securities in consultation with the lead merchant banker or through the book building process. In case of debt instruments, the issuer determines the coupon rate and conversion price of the convertible debt instruments in consultation with the lead merchant banker or through the book building process.

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Screen-based Trading

The trading on stock exchanges in India used to take place through open outcry without use of information technology for immediate matching or recording of trades. This was time consuming and inefficient. This imposed limits on trading volumes and efficiency. In order to provide efficiency, liquidity and transparency, NSE introduced a nation-wide on-line fully-automated screen based trading system (SBTS) where a member can punch into the computer quantities of securities and the prices at which he likes to transact and the transaction is executed as soon as it finds a matching sale or buy order from a counter party. SBTS electronically matches orders on a strict price/time priority and hence cuts down on time, cost and risk of error, as well as on fraud resulting in improved operational efficiency. It allows faster incorporation of price sensitive information into prevailing prices, thus increasing the informational efficiency of markets. It enables market participants to see the full market on real-time, making the market transparent. It allows a large number of participants, irrespective of their geographical locations, to trade with one another simultaneously, improving the depth and liquidity of the market. It provides full anonymity by accepting orders, big or small, from members without revealing their identity, thus providing equal access to everybody. It also provides a perfect audit trail, which helps to resolve disputes by logging in the trade execution process in entirety. This diverted liquidity from other exchanges and in the very first year of its operation, NSE became the leading stock exchange in the country, impacting the fortunes of other exchanges and forcing them to adopt SBTS also. As a result, manual trading disappeared from India. Technology was used to carry the trading platform to the premises of brokers. NSE carried the trading platform further to the PCs in the residences of investors through the Internet and to hand-held devices through WAP for convenience of mobile investors. This made a huge difference in terms of equal access to investors in a geographically vast country like India.

Trading Cycle

The trades accumulated over a trading cycle and at the end of the cycle, these were clubbed together, and positions were netted out and payment of cash and delivery of securities settled the balance. This trading cycle varied from 14 days for specified securities to 30 days for others and settlement took another fortnight. Often this cycle was not adhered to. Many things could happen between entering into a trade and its performance providing incentives for either of the parties to go back on its promise. This had on several occasions led to defaults and risks in settlement. In order to reduce large open positions, the trading cycle was reduced over a period of time to a week. The exchanges, however, continued to have different weekly trading cycles, which enabled shifting of positions from one exchange to another. Rolling settlement on T+5 basis was introduced in respect of specified scrips reducing the trading cycle to one day. It was made mandatory for all exchanges to follow a uniform weekly trading cycle in respect of scrips not under rolling settlement. All scrips moved to rolling settlement from December 2001. T+5 gave way to T+3 from April 2002 and T+2 since April 2003. The market also had a variety of deferral products like modified carry forward system, which encouraged leveraged trading by enabling postponement of settlement. The deferral products have been banned. The market has moved close to spot/cash market.

Derivatives Trading

To assist market participants to manage risks better through hedging, speculation and arbitrage, SC(R)A was amended in 1995 to lift the ban on options in securities. However, trading in derivatives did not take off, as there was no suitable legal and regulatory framework to govern these trades. Besides, it needed a lot of preparatory work – the underlying cash markets strengthened with the assistance of the automation of trading and of the settlement system; the exchanges developed adequate infrastructure and the information systems required to

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implement trading discipline in derivative instruments. The SC(R)A was amended further in December 1999 to expand the definition of securities to include derivatives so that the whole regulatory framework governing trading of securities could apply to trading of derivatives also. A three-decade old ban on forward trading, which had lost its relevance and was hindering introduction of derivatives trading, was withdrawn and derivatives trading took off in June 2000. The Mini derivative Futures & Options contract was introduced for trading on S&P CNX Nifty on January 1, 2008 while the long-term option contracts on S&P CNX Nifty were introduced for trading on March 3, 2008.

Demutualisation

Historically, brokers owned, controlled and managed stock exchanges. In case of disputes, the self often got precedence over regulations leading inevitably to conflict of interest. The regulators, therefore, focused on reducing dominance of members in the management of stock exchanges and advised them to reconstitute their governing councils to provide for at least 50% non-broker representation. This did not materially alter the situation. In face of extreme volatility in the securities market, Government proposed in March 2001 to corporatise the stock exchanges by which ownership, management and trading membership would be segregated from one another. Government offered a variety of tax incentives to facilitate corporatisation and demutualization of stock exchanges.

NSE, however, adopted a pure demutualised governance structure where ownership, management and trading are with three different sets of people. This completely eliminated any conflict of interest and helped NSE to aggressively pursue policies and practices within a public interest (market efficiency and investor interest) framework. Currently, there are 19 demutualised stock exchanges.

Depositories Act

The earlier settlement system on Indian stock exchanges gave rise to settlement risk due to the time that elapsed before trades are settled. Trades were settled by physical movement of paper. This had two aspects. First, the settlement of trade in stock exchanges by delivery of shares by the seller and payment by the purchaser. The stock exchange aggregated trades over a period of time to carry out net settlement through the physical delivery of securities. The process of physically moving the securities from the seller to the ultimate buyer through the seller's broker and buyer's broker took time with the risk of delay somewhere along the chain. The second aspect related to transfer of shares in favour of the purchaser by the company. The system of transfer of ownership was grossly inefficient as every transfer involved physical movement of paper securities to the issuer for registration, with the change of ownership being evidenced by an endorsement on the security certificate. In many cases the process of transfer took much longer, and a significant proportion of transactions ended up as bad delivery due to faulty compliance of paper work. Theft, forgery, mutilation of certificates and other irregularities were rampant, and in addition the issuer had the right to refuse the transfer of a security. All this added to costs, and delays in settlement, restricted liquidity and made investor grievance redressal time consuming and at times intractable.

To obviate these problems, the Depositories Act, 1996 was passed to provide for the establishment of depositories in securities with the objective of ensuring free transferability of securities with speed, accuracy and security by (a) making securities of public limited companies freely transferable subject to certain exceptions; (b) dematerialising the securities in the depository mode; and (c) providing for maintenance of ownership records in a book entry form. In order to streamline both the stages of settlement process, the Act envisages transfer of ownership of securities electronically by book entry without making the securities move from person to person. In order to promote dematerialisation, the regulator mandated trading and settlement

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in demat form in an ever-increasing number of securities in a phased manner. The stamp duty on transfer of demat securities was waived. Two depositories, namely, NSDL and CDSL, came up to provide instantaneous electronic transfer of securities. All actively traded scrips are held, traded and settled in demat form. Demat settlement accounts for over 99% of turnover settled by delivery. This has almost eliminated the bad deliveries and associated problems.

To prevent physical certificates from sneaking into circulation, it is mandatory for all IPOs to be compulsorily traded in dematerialised form. The admission to a depository for dematerialisation of securities has been made a prerequisite for making a public or rights issue or an offer for sale. It has also been made compulsory for public listed companies making IPO of any security for ₹ 10 crore or more to do the same only in dematerialised form.

Notes **Risk Management**

Market integrity is the essence of any financial market. To pre-empt market failures and protect investors, the regulator/exchanges have developed a comprehensive risk management system, which is constantly monitored and upgraded. It encompasses capital adequacy of members, adequate margin requirements, limits on exposure and turnover, indemnity insurance, on-line position monitoring and automatic disablement, etc. They also administer an efficient market surveillance system to curb excessive volatility, detect and prevent price manipulations. Exchanges have set up trade/settlement guarantee funds for meeting shortages arising out of non-fulfilment/partial fulfilment of funds obligations by the members in a settlement. As a part of the risk management system, the index based market wide circuit breakers have also been put in place.

The anonymous electronic order book ushered in by the NSE did not permit members to assess

credit risk of the counter-party necessitated some innovation in this area. To effectively address this issue, NSE introduced the concept of a novation, and set up the first clearing corporation, viz. National Securities Clearing Corporation Ltd. (NSCCL), which commenced operations in April 1996. The NSCCL assures the counterparty risk of each member and guarantees financial settlement. Counterparty risk is guaranteed through a fine tuned risk management system and an innovative method of on-line position monitoring and automatic disablement. NSCCL established a Settlement Guarantee Fund (SGF). The SGF provides a cushion for any residual risk and operates like a self-insurance mechanism wherein the members contribute to the fund. In the event of failure of a trading member to meet his obligations, the fund is utilized to the extent required for successful completion of the settlement. This has eliminated counter-party risk of trading on the Exchange. The market has now full confidence that settlements will take place in time and will be completed irrespective of default by isolated trading members. In fact such confidence is driving volumes on exchanges.

Traditionally, brokerage firms in India have been proprietary or partnership concerns with unlimited liabilities. This restricted the amount of capital that such firms can raise. The growing volume of transactions made it imperative for such firms to be well capitalised and professional. The necessary legal changes were effected to open up the membership of stock exchanges to corporates with limited liability, so that brokerage firms may be able to raise capital and retain earnings. In order to boost the process of corporatisation, capital gains tax payable on the difference between the cost of the individual's initial acquisition of membership and the market value of that membership on the date of transfer to the corporate entity was waived. In response, many brokerage firms reorganised themselves into corporate entities.

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Investor Protection

The SEBI Act established SEBI with the primary objective of protecting the interests of investors in securities and empowers it to achieve this objective. SEBI specifies the matters to be disclosed and the standards of disclosure required for the protection of investors in respect of issues and issues directions to all intermediaries and other persons associated with the securities market in the interest of investors or of orderly development of the securities market. The Central Government established a fund called Investor Education and Protection Fund (IEPF) in October 2001 for the promotion of awareness amongst investors and protection of the interest of investors. The Government issued the following guidelines for the purpose of financial assistance from IEPF:

(a) Any organisation/entity/person with a viable project proposal on investors' education and protection would be eligible for assistance from the fund.

(b) The entity should be registered under the Societies Registration Act or formed as Trusts or incorporated Companies; should be in existence for a minimum period of 2 years prior to its date of application for registration for assistance; should have a minimum of 20 members and a proven record of 2 years; and should have rules, regulations and or by-laws for its governance and management.

(c) No profit making entity shall be eligible for financial assistance from the fund.

(d) Not withstanding the above, the Committee on IEPF can give a project to any organisation.

(e) While considering proposals, the IEPF Committee takes into account the audited accounts and the annual reports of the last three years of the entity seeking assistance from IEPF.

(f) The limit for each entity for assistance would be subject to 5% of the budget of IEPF during that financial year and not exceeding 80%1 of the amount to be spent on the proposed programme/activity.

DEA, DCA, SEBI and exchanges have set up investor grievance cells for redressal of investor grievance. The exchanges maintain investor protection funds to take care of investor claims, which may arise out of non-settlement of obligations by a trading member for trades executed on the exchange. DCA has also set up an investor education and protection fund for the promotion of investors' awareness and protection of interest of investors. All these agencies and investor associations are organising investor education and awareness programmes.

Globalisation

Indian securities market is getting increasingly integrated with the rest of the world. Indian companies have been permitted to raise resources from abroad through issue of ADRs, GDRs, FCCBs and ECBs. ADRs/GDRs have two-way fungibility. Indian companies are permitted to list their securities on foreign stock exchanges by sponsoring ADR/GDR issues against block shareholding. NRIs and OCBS are allowed to invest in Indian companies. FIIs have been permitted to invest in all types of securities, including government securities. The investments by FIIs enjoy full capital account convertibility. They can invest in a company under portfolio investment route upto 24% of the paid up capital of the company. This can be increased up to the sectoral cap/statutory ceiling, as applicable, provided this has the approval of the Indian company's board of directors and also its general body. Indian Stock Exchanges have been permitted to set up trading terminals abroad. The trading platform of Indian exchanges is now accessed through the Internet from anywhere in the world. Mutual Funds have been permitted to set up off-shore funds to invest in equities of other countries. They can also invest in ADRs/GDRs of Indian companies.

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Mini Nifty and Long Dated Options

The year 2008 witnessed the launch of new products in the F&O Segment. The mini derivative (futures and options) contracts on S&P CNX Nifty were introduced for trading on January 1, 2008. The mini contracts are a fraction of normal derivative contracts and extend greater affordability to individual investors, helps the individual investor to hedge risks of a smaller portfolio, offers low levels of risk in terms of smaller level of possible downside compared to a big size contract and also increases overall market liquidity and participation. The long term Options Contracts on NSEs S&P CNX Nifty were launched on March 3, 2008. The long-term options are similar to short-term options, but the later expiration dates offer the opportunity for long-term investors to take a view on prolonged price changes without needing to use a combination of shorter term option contracts. The premiums for long-term options tend to be higher than that of short-term option because the increased expiration period means increased possibility of larger movement in the price of the underlying.

Short Selling

Pursuant to the recommendations of the Secondary Market Advisory Committee (SMAC) of SEBI and the decision of the SEBI Board, it was decided to permit all classes of investors to short sell.

Short selling is defined as selling a stock which the seller does not own at the time of trade. It increases liquidity in the market, and makes price discovery more efficient. Besides, it curbs manipulation of stocks as informed investors are able to go short on stocks they feel are higher than fair value. This facility was available to non-institutional investors. Vide a circular in February 2008; SEBI permitted all classes of investors, viz., retail and institutional investors to short sell. It, however, does not permit naked short sales and accordingly, requires participants to mandatorily honour their obligation of delivering the securities at the time of settlement. It does not permit institutional investor to do day trading i.e., square-off their transactions intra-day. In other words, all transactions are be grossed for institutional investors at the custodians' level and the institutions are required to fulfill their obligations on a gross basis. The custodians, however, continue to settle their deliveries on a net basis with the stock exchanges. It has put in a scheme for Securities Lending and Borrowing to provide the necessary impetus to short sell. The facility of short sales is made available in respect of securities traded in derivatives segment of exchanges.

Securities Lending and Borrowing

SEBI issued a SLB scheme on December 20, 2007. The salient features of the scheme are as under:

- All Clearing members of NSCCL including Banks and Custodians referred to as 'Participant' are registered as Approved Intermediaries (AIs) under the SLS, 1997.
- The SLB would take place on an automated, screen based, order-matching platform which will be provided by the AIs. This platform would be independent of the other trading platforms.
- Currently, securities available for trading in F&O segment of National Stock Exchange of India Ltd. (NSEIL) would be eligible for lending & borrowing under the scheme. Securities lending and borrowing is permitted in dematerialized form only.
- All categories of investors including retail, institutional etc. will be permitted to borrow and lend securities. The borrowers and lenders would access the platform for lending/ borrowing set up by the AIs through the clearing members (CMs) who are authorized by the AIs in this regard.

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- The tenure of lending/borrowing would be fixed as standardised contracts. Accordingly the return of securities by borrower is scheduled on the respective reverse leg settlement day. Each reverse leg settlement date is assigned a specific series number. The tenure of lending and borrowing ranges from 1 month up to a maximum period of 12 months.

The first leg of the transactions across all series including early recall/repayment transactions are settled on T+1 day on a gross basis. The settlement of lending and borrowing transactions would be independent of normal market settlement.

The settlement of the lending and borrowing transactions should be done on a gross basis at the level of the clients i.e. no netting of transactions at any level will be permitted.

NSCCL, as an Approved Intermediary (AI) launched the Securities Lending & Borrowing Scheme from April 21, 2008. Lending & Borrowing is carried on an automated screen based platform where the order matching is done on basis of price time priority.

Direct Market Acess: During April 2008, Securities & Exchange Board of India (SEBI) allowed the direct market access (DMA) facility to the institutional investors. DMA allows brokers to offer clients direct access to the exchange trading system through the broker's infrastructure without manual intervention by the broker. DMA facility gives clients direct control over orders, help in faster execution of orders, reduce the risk of errors from manual order entry and lend greater transparency and liquidity. DMA also leads to lower impact cost for large orders, better audit trails and better use of hedging and arbitrage opportunities through the use of decision support tools/algorithms for trading.

Volatility Index: With rapid changes in volatility in securities market from time to time, a need was felt for an openly available and quoted measure of market volatility in the form of an index to help market participants. On January 15, 2008, Securities and Exchange Board of India recommended Exchange to construct and disseminate the volatility index. Volatility Index is a measure, of the amount by which an underlying Index is expected to fluctuate, in the near term, (calculated as annualised volatility, denoted in percentage e.g. 20%) based on the order book of the underlying index options. On April 08, 2008, NSE launched the Volatility Index, India VIX, based on the Nifty 50 Index Option prices. From the best bid-ask prices of Nifty 50 Options contracts, a volatility figure (%) is calculated which indicates the expected market volatility over the next 30 calendar days. The India VIX is a simple but useful tool in determining the overall volatility of the market

Cross Margining: Many trading members undertake transactions on both the cash and derivative segments of an Exchange. They keep separate deposits with the exchange for taking positions in two different segments. In order to improve the efficiency of the use of the margin capital by market participants and as in initial step towards cross margining across cash and derivatives markets SEBI allowed Cross Margining benefit in May 2008.

For Cross margining the stock positions of the institutions in capital market segment after confirmation by the custodian on T+1 day shall be compared with the stock futures position of the same institution in derivative segment based on the CP code of the institution at the end of the day. The position shall be considered for cross margining only if the position in the capital market segment off set the position in the derivative segment.

SEBI has allowed the following to start with: (a) Cross margin is available for institutional trades. (b) Cross margin is available to positions in cash market having corresponding off-setting positions in the stock futures market. (c) For positions in the cash market which have corresponding offsetting positions in the stock futures, VaR margin is not be levied on the cash market position to the extent of the off-setting stock futures market position. (d) Extreme Loss margin and Market to Market margin shall continue to be levied on the entire cash market

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position. (e) The near-month stock futures positions are not considered for cross-margin benefit three days prior to expiry (the last Thursday of every month) and there will be no change in the margins on the F & O positions.

In December 2008, SEBI extended the cross margin facility across Cash and F&O segment and to all the market participants. The salient features of the cross-margining are as under:

1. Cross margin is available across Cash and F&O segment and to all categories of market participants.
2. The positions of clients in both the Cash and F&O segments to the extent they offset each other shall be considered for the purpose of cross margining as per the following priority. Index futures and constituent stock futures in F&O segment. Index futures and constituent stock positions in Cash segment. Stock futures in F&O segment and stock positions in Cash segment
3. In order to extend the cross margin benefit as per 2 (a) and (b) above, the basket of constituent stock futures/stock positions shall be a complete replica of the index futures.
4. The positions in F&O segment for stock futures and index futures shall be in the same expiry month to be eligible for cross margin benefit.
5. Positions in option contracts shall not be considered for cross margining benefit.
6. The Computation of cross margin shall be at client level on an on-line real time basis.
7. For institutional investors the positions in Cash segment shall be considered only after confirmation by the custodian on T+1 basis and on confirmation by the clearing member in F&O segment.
8. The positions in the Cash and F&O segment shall be considered for cross margining only till time the margins are levied on such positions.
9. The positions which are eligible for offset shall be subject to spread margins. The spread margins shall be 25% of the applicable upfront margins on the offsetting positions.

Government Securities Market

The government securities market has witnessed significant transformation in the 1990s. With giving up of the responsibility of allocating resources from securities market, government stopped expropriating seigniorage and started borrowing at near-market rates. Government securities are now sold at market related coupon rates through a system of auctions instead of earlier practice of issue of securities at very low rates just to reduce the cost of borrowing of the government. Major reforms initiated in the primary market for government securities include auction system (uniform price and multiple price method) for primary issuance of T-bills and central government dated securities, a system of primary dealers and non-competitive bids to widen investor base and promote retail participation, issuance of securities across maturities to develop a yield curve from short to long end and provide benchmarks for rest of the debt market, innovative instruments like, zero coupon bonds, floating rate bonds, bonds with embedded derivatives, availability of full range (91-days, 182 days and 364-days) of T-bills, etc. The reforms in the secondary market include Delivery versus Payment system for settling scripless SGL transactions to reduce settlement risks, SGL Account II with RBI to enable financial intermediaries to open custody (Constituent SGL) accounts and facilitate retail transactions in scripless mode, enforcement of a trade-for-trade regime, settlement period of T+1 for all transactions undertaken directly between SGL participants and for transactions routed through NSE brokers, routing transactions through brokers of NSE, OTCEI and BSE, repos in all

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government securities with settlement through SGL, liquidity support to PDs to enable them to support primary market and undertake market making, special fund facility for security settlement, etc. Other measures include abolition of TDS on government securities and stamp duties on transfer of demat debt securities.

Market Infrastructure

As part of the ongoing efforts to build debt market infrastructure, two new systems, the Negotiated Dealing System (NDS) and the Clearing Corporation of India Limited (CCIL) commenced operations on February 15, 2002. NDS, interalia, facilitates screen based negotiated dealing for secondary market transactions in government securities and money market instruments, online reporting of transactions in the instruments available on the NDS and dissemination of trade information to the market. Government Securities (including T-bills), call money, notice/term money, repos in eligible securities, Commercial Papers and Certificate of Deposits are available for negotiated dealing through NDS among the members. The CCIL facilitates settlement of transactions in government securities (both outright and repo) on Delivery versus Payment (DvP-II) basis which provides for settlement of securities on gross basis and settlement of funds on net basis simultaneously. It acts as a central counterparty for clearing and settlement of government securities transactions done on NDS.

Further, there was adoption of modified Delivery-versus-Payment mode of settlement (DvP III in March 2004). The settlement system for transaction in government securities was standardized to T+1 cycle on May 11, 2005. To provide banks and other institutions with a more advanced and more efficient trading platform, an anonymous order matching trading platform (NDS-OM) was introduced in August 2005. Short sale was permitted in G-secs in 2006 to provide an opportunity to market participants to manage their interest rate risk more effectively and to improve liquidity in the market. 'When issued' (WI) trading in Central Government Securities was introduced in 2006.

As a result of the gradual reform process undertaken over the years, the Indian G-Sec market has become increasingly broad-based and characterized by an efficient auction process, an active secondary market, electronic trading and settlement technology that ensure safe settlement with Straight through Processing (STP).

Self Assessment

Fill in the blanks:

11. Positions in option contracts shall not be considered for ..... margining benefit.
12. The computation of cross margin shall be at ..... level on an on-line real time basis.
13. For institutional investors the positions in Cash segment shall be considered only after confirmation by the custodian on ..... basis and on confirmation by the clearing member in F&O segment.
14. The positions in the Cash and F&O segment shall be considered for ..... margining only till time the margins are levied on such positions.
15. Cross margin is available for ..... trades.

Notes

Case Study

Primary Market Research Leads To Market Entry Success

Challenge

How to create new differentiated service offerings for entry into a fragmented market with many competitors:

Landscape

A global financial services firm had set its sights on a relatively new, but already fragmented market for a new service offering. Specifically, intelligence was needed about the market potential and competitive landscape for derivatives processing services in the securities industry.

It was important to understand the real and perceived competitive advantages of any established competitors, barriers to entry for the market, winning market entry strategies, and validation of the offering and proposed pricing model.

Process

MIDIOR conducted primary and secondary research for all of the significant competitors to understand their product offerings, partnerships, pricing strategies and growth plans along. This research centered on more than 20 software vendors, banks, IT, and financial services firms and leveraged both "discussion based" interviews and in-depth analysis of publicly available materials. From these results, competitors were categorized and ranked according to available services, business model, and market preparedness. MIDIOR made recommendations for a market entry strategy, opportunities for differentiation, packaging and bundling strategies and various pricing options. Together with the new product development team, MIDIOR created and implemented a market entry and product launch plan that was completed in three months.

Results

With MIDIOR's help, the company was able to enter the market sooner than anticipated, identify specific opportunities for creating competitive barriers, and establish an early mover advantage. Because the product team had gained a better understanding of the market opportunity, they were able to establish a clear product roadmap and compelling, quantified business case which resulted in appropriate funding and an optimized development spend. By launching quickly, the firm was also able to build solid client partnerships that were critical to the development of a robust service offering that is now highly valued by their clients.

Question

Pen down your views on the case

Source: http://www.midior.com/case-studies/primary-market-research.html

2.4 Summary

- The global securities market has been constantly evolving over the years to serve the needs of traders.

Notes

- Traders require markets that are liquid, with minimal transaction and delay costs, in addition to transparency and assured completion of the transaction.
- Based on these core requirements, a handful of securities market structures have become the dominant trade execution structures in the world.
- The government securities market has witnessed significant transformation in the 1990s.
- With giving up of the responsibility of allocating resources from securities market, government stopped expropriating seigniorage and started borrowing at near-market rates.
- Government securities are now sold at market related coupon rates through a system of auctions instead of earlier practice of issue of securities at very low rates just to reduce the cost of borrowing of the government.
- Major reforms initiated in the primary market for government securities include auction system (uniform price and multiple price method) for primary issuance of T-bills and central government dated securities.
- As a result of the gradual reform process undertaken over the years, the Indian G-Sec market has become increasingly broad-based and characterized by an efficient auction process.

2.5 Keywords

Primary Market: The primary market refers to the market that provides the channel for sale of new securities

Pure Forward: Pure forward is out side the formal market.

Secondary Market: Secondary market refers to a market where securities are traded after being initially offered to the public in the primary market and/or listed on the Stock Exchange.

Short Selling: Short selling is defined as selling a stock which the seller does not own at the time of trade.

Variant of Secondary Market: A variant of secondary market is the forward market, where securities are traded for future delivery and payment. Pure forward is out side the formal market.

2.6 Review Questions

1. What is cross margining?
2. Explain T+1 concept.
3. Who is Indian stock market regulator?
4. Discuss market infrastructure in Indian stock market.
5. "Positions in option contracts shall not be considered for cross margining benefit". Why?
6. "The securities markets in India have witnessed several policy initiatives". Discuss.
7. What are the various reforms have been witnessed by the debt markets in India?
8. What is short selling concept?
9. How does investors are protected?
10. Write explanatory note on NSCCL.

Notes

Answers: Self Assessment

1.	Transfer	2.	Decouple
3.	Securities	4.	Supplier, user
5.	Preference	6.	False
7.	True	8.	True
9.	True	10.	True
11.	Cross	12.	Client
13.	T+1	14.	Cross
15.	Institutional		

2.7 Further Readings

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Unit 3: Primary Market and Secondary Market

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Objectives

After studying this unit, you will be able to:

- Explain structure of primary market in India
- Discuss investment procedure

Notes

- Elaborate primary market intermediaries in India
- Discuss role of NSCCL

Introduction

The securities markets of our country, where securities of corporate enterprises are traded, comprise two main markets, viz., primary market and secondary market. In the primary market, new securities are floated and exchanged for cash, credit or other securities. New security issues are floated both by the newly set up organizations and by the existing ventures. This market is popularly designated as new issues market. Contrary to this, in the secondary market buying and selling 'second hand' or existing securities are transacted. Stock market is the nickname of the secondary market.

In this unit we will study about the various products in primary and secondary market and the investment procedure involved.

3.1 Structure of Primary Market in India

The agencies associated with functions of originating underwriting and distributions constitute the organization of the primary market in India. Subscribers also form part of the market. Issuers of new securities include agencies connected with the floatation of initial issues and those concerned with the floatation of existing issues. These agencies are known as promoters who conduct detailed investigations about the venture to be set up, formulates financial plan, prepares prospectus for capital issues, approaches underwriting and brokerage firms for underwriting the issues and makes arrangements for advertising and circulating the prospectus to procure subscriptions. Thus, a promoter is the issuer or supplier of new companies in the market. In the case of existing enterprises, they themselves are the suppliers of new issues when they float further issues. However, when the existing companies offer new security issues only to their existing stockholders, they will not constitute the suppliers of new issues in the new issue market. On the contrary, if they offer issues to public through prospectuses, they are regarded as the suppliers of new issues in the market. In the case of existing enterprises, it is the Board of Directors who take decisions as to why, how and when new issues will be floated. They also enter into agreement with underwriters and brokers before floating public issues.

In India, underwriting for public issues was compulsory till October 1994 in the sense that an issue had to be underwritten if the issuer opted for it while applying for permission to make an issue, or if the SEBI felt that it has to be underwritten. The underwriting business was quite lucrative and devolvement on underwriters was small due to good public response till 1992-93. But around 1992-93, many underwriters lost their money as many issues turned out to be dual; devolvement became enormous and underwriters backed out of their commitments. Since October 1994, the SEBI has made underwriting optional.

Notes The distribution function of the primary market facilitates the sale of securities to ultimate investors. This function is performed by specialized agencies like brokers and dealers in securities. They maintain a constant and close link with the issuers and the ultimate investors on the one hand, and issuers and other agencies of capital market, on the other. Finally, subscribers, who buy new issues floated in the market, constitute a significant segment of the new issue market.

Notes

Self Assessment

Fill in the blanks:

1. The agencies associated with functions of originating underwriting and distributions constitute the organization of the ..... market in India.
2. Subscribers also form part of the .....

Caselet

The Indian IPO Market in Early 2008

In the first half of February 2008, Wockhardt Hospitals Ltd. (Wockhardt), Emaar MGF Land Ltd. (Emaar MGF), and SVEC Constructions (SVEC) withdrew their Initial Public Offerings (IPOs) owing to poor investor response. Some analysts were of the opinion that overpricing was the main reason for their withdrawal, while others felt that the turmoil in the global financial markets had played a larger role. Still others were of the view that the IPO of Reliance Power Ltd. (RPL), part of the Reliance Anil Dhirubhai Ambani Group (ADAG), which opened on January 15, 2008, was responsible for the tepid response to these three IPOs, as the RPL IPO had sucked out liquidity from the market.

Source: http://www.icmrindia.org/casestudies/catalogue/Business%20Environment/The%20Indian%20IPO%20Market.htm

3.2 Investment Procedure

Distribution of securities to prospective investors to mop up their surpluses is a highly specialized activity that requires a lot of expertise and experience. As such, companies seeking to garner funds from a large number of investors—both individuals and institutions—have to hire the services of the specialized agencies such as underwriters, brokers, merchant bankers, etc. Besides, there are other ways which can be employed for selling securities to the investing public. In India, following methods are usually employed to garner funds from the public through floatation of securities.

3.2.1 Public Issue Through Prospectus

In this method, a public limited company invites the public at large through prospectus to subscribe to the issue of securities. According to the SEBI norms, a minimum of 49% of the total issue at a time is to be offered to public. A prospectus is a document that provides information about the company and its proposed issue. The company and the directors signing this document are personally liable for any false statement or misrepresentation of material facts in the prospectus.

Public issue through prospectus may take the form of direct selling, sale through investment intermediaries and underwriting of issues. Direct selling of securities method can be used when a company intends to approach a small number of large individual or institutional investors. However, there is no certainty of procuring the desired funds from investors through direct selling. This is why companies may take the help of intermediaries and specialized agencies such as brokers, merchant bankers, for selling such securities. These agencies charge commission for their service. However, they do not provide any guarantee to the issue regarding the sale of securities. To remove this deficiency and to ensure certainty of procurement of the desired funds, companies approach underwriting firms who, in lieu of commission, undertake the guarantee of buying the unsubscribed portion of the offer. Thus, an underwritten placement method is relatively more safe method of acquiring funds from the public at large.

Notes

The pure prospectus method of selling securities is very popular method because it is useful to both to the issuers as well as to the investors. The issuers have the benefit of wider diffusion of ownership of securities, thus avoiding the possibility of concentration of controlling power in the hands of a few. Investors have the advantage of getting detailed information about the company and its issue through prospectus as per the SEBI requirements. This method also promotes confidence of investors through transparency and non-discriminatory basis of allotment. There is hardly any scope of artificial jacking up of prices if the issue is made public.

Did u know? This method can be gainfully employed by large companies offering big issues because of high costs involved in raising capital.

Further, it is a time-consuming method as a lot of legal formalities need to be complied with before floating an issue.

3.2.2 Offer for Sale

This method involves outright sale of shares enbloc by the company to issue houses or a group of brokers at an agreed price who in turn resell them to the public at large. In such cases, the issuing houses may act as agents of the company. The difference between the resale price and purchase price is termed as spread and represents the profit of the issue houses. In the US, issuing companies cannot approach the public directly. They are under obligation to sell their shares in the first instance to underwriters, who then issue these shares to the investing public. In India, this method has been employed on an experimental basis under the name 'bought out deals' wherein the shares are first sold to the sponsor under an agreement that the sponsor shall sell them to public within a specified period of time.

This method of distribution of securities has the advantage of ensuring success of the issue and economizing on cost of new issues and thus the issuing company is relieved of the botherations involved in selling securities to the public. The issue houses also stand to gain by charging higher prices.

3.2.3 Private Placement

In this method, the issuing company offers issue privately to a select group of investors without the prospectus. In this process, the issuer may call upon the services of brokers or issue houses. This method works in a manner similar to the 'offer for sale method' whereby securities are first sold to issue houses, etc., who then sell them at higher prices to individuals and institutions.

This method of selling securities is very economical and less troublesome. As such, it suits the requirements of small companies. To others, this method is useful especially when the stock market is in bearish state and the public response is poor. However, the disadvantage of this method is that the investor cannot resell the security for a specific period of time. This method may also lead to concentration of securities in a few hands. There is also scope for creating artificial scarcity for the securities, thus jacking up the prices temporarily and misleading the general public.

3.2.4 Rights Issue

Rights issue method is an important method of distributing securities in which the existing company offers shares to its existing shareholders in proportion to their existing ownership. As per Section 81 of the Companies Act, 1956, existing shareholders get a right of 'pre-emption' and they have the option to exercise the right to renounce it or throw away. For that purpose, a company intending to increase its subscribed capital by the issue of new shares either after two

years of its formation or after one year of the first issue of shares whichever is earlier will have to offer the shares to the existing shareholders with the right to reserve them in favour of a nominee.

Caution Rights issue is the cheapest and convenient method of raising funds and protects the interest of the existing shareholders against the dilution of their ownership.

3.2.5 Over-the-Counter Placement

This method has come to be employed in recent years, especially after the commencement of the operations of Over-the-Counter Exchange (OTCE) in 1992. The OTC permits small companies to raise funds through its exchange. Under this method, the company intending to raise funds through OTCE appoints a member of the OTCE as sponsor. The sponsor appraises the project and values the shares of the company. The shares are placed by the sponsor with itself and other members and dealers of the OTCE. The sponsor ensures the success of the issue even if it is required to subscribe to all the shares by itself. The OTCE members and dealers operate counters to facilitate trading with investing public. The distribution of shares through OTCE has to be made as per the SEBI guidelines. This method of selling securities is most suited to small enterprises.

3.2.6 Initial Public Offer through Stock Exchange Online System (E-IPO)

In addition to other requirements for public issues as given in the SEBI guidelines wherever applicable, a company proposing to issue capital to public, through the online system of the stock exchange for offer of securities, has to comply with the requirements discussed below. They are applicable to the fixed price issue as well as for the fixed price portion of book-built issues. The issuing companies would have the option to issue securities to the public either through the online system of the stock exchange or through the existing banking channel.

- ***Agreement with Stock Exchange:*** The company should enter into an agreement with the stock exchange(s), specifying, inter alia, their mutual rights/duties/responsibilities and obligations inter se. It may also provide for a dispute resolution mechanism between them.
- ***Appointment of Brokers:*** The stock exchange(s) would appoint the SEBI registered stockbrokers of the exchange to accept applications and place orders with the company, considering them as collection centres. They would collect the money from the clients for orders placed and in case clients fail to pay for shares allocated, the brokers would have to pay the amount. The company/lead manager should ensure that the appointed brokers are financially capable of honouring their commitments if their clients default. The company would pay the brokers a commission/fee for their services and the stock exchange should ensure that they do not levy a service fee on their clients in lieu of their services.
- ***Appointment of Registrar to Issue:*** The company should appoint a registrar to the issue with electronic connectivity with the stock exchange(s) through which the securities are offered under the system.
- ***Listing:*** The company may list its securities on an exchange other than the one through which it offers its securities to the public via the online system.
- ***Responsibility of Lead Manager:*** The lead manager would be responsible for coordination of all the activities among various intermediaries connected on the issue system. The

Notes

names of the appointed brokers, along with other intermediaries (i.e. lead manager, registrar to issue), should be disclosed in the prospectus and the application form.

- ***Mode of Operation:*** The company should, after filing the offer document with the ROCs and before opening of the issue, publish an advertisement each in an English and Hindi daily with nationwide circulation and also in a regional daily with circulation at the place where its registered office is situated. The advertisement should contain the salient features of the offer document as specified in form 2-A of the companies (Central Government's) General Rules and Forms, 1956. In addition to other required information, it should contain (1) the date of opening/closing of issue, (2) the method and process of application allotment and (3) the names/addresses/telephone numbers of the brokers/centres for accepting applications.

During the period the issue is open to public for subscription, the applicants may:

1. Approach the brokers of the stock exchange(s) through which the securities are offered through the online system, to place an order for subscribing to the securities. Every broker should accept orders from all clients who place orders through him;
2. Directly send the application forms, along with the cheque/demand draft for the sum payable towards the application money, to the registrar to the issue or place the order to subscribe through a broker under the online system. In the case of issue of capital of ₹ 10 crore or above, the registrar to the issue should open centres for collection of direct applications at the four metropolitan centres situated at Delhi, Chennai, Kolkata and Mumbai.

The broker should collect the client registration form from the applicants, duly filled and signed, before placing the order in the system as per the "Know Your Client" rule as specified by the SEBI and as may be modified from time to time. He should, thereafter, enter the buy order in the system on behalf of the clients and enter details including the name, address, telephone number and category of the applicant, the number of shares applied for, beneficiary ID, DP code and so on, and gives an order number/order confirmation slip to the applicant.

The applicant may withdraw applications according to the Companies Act, 1956.

The broker may collect an amount to the extent of 100 per cent of the application money as margin money from the client before he places an order on their behalf. He should open a separate bank account (Escrow Account) with the clearing house bank for primary market issues in which the amount collected from clients as margin money should be deposited. At the end of each day, while the issue is open for subscription, he should download/forward the order data to the registrar to the issue. On the date of closure of the issue, the final status of orders received should be sent to the registrar to the issue/company.

On the closure of the issue, the designated stock exchange, along with the lead merchant banker and registrars to the issue, should ensure that the basis of allocation is finalized in a fair and proper manner according to the basis of allotment norms. These may be modified from time to time. After the finalization of the basis of allocation, the registrar to the issue/company should send the computer file containing the allocation details, that is, the allocation numbers, allocated quantity and so on of the successful applicants to the exchange to be processed, generate the broker-wise pay in obligation and send the file to member brokers. On receipt of the basis of allocation data, the brokers should immediately intimate the fact of allocation to their clients/applicants. They should ensure that each successful client/applicant submits the duly filled in and signed application form to them along with the amount payable towards the application money. The amount already paid by the applicant as margin money would be adjusted towards the total allocation money payable. The broker should, thereafter, hand over the application forms of the successful applicants, who have paid the application money, to the exchange to submit the same to the registrar to the issue/company for their records.

Notes

The broker would refund the margin money, collected earlier, within three days of receipt of basis of allocation to the applicants who did not receive allocation. He should give details of the amount received from each client and the names of clients who have not paid the application money, and also give a soft copy of this data to the exchange. On the pay-in day, the broker should deposit the amount collected from the clients in the escrow account opened for primary issues with the clearing house/bank. The clearing house would debit the primary issue account of each broker and credit the amount so collected from each broker to the 'Issue Account'.

In the event of successful applicants failing to pay the application money, the broker through whom such clients placed the order should bring in the funds to make good the latter's default. The broker who does not bring in the funds would be declared defaulter by the exchange and action, as prescribed under its bylaws, would be initiated against him. In such a case, if the minimum subscription as disclosed in the prospectus is not received, the issue proceeds would be refunded to the applicants.

The subscriber should have an option to receive the security certificates or hold the securities in dematerialized form as specified in the SEBI guidelines.

The exchange concerned should not use the Settlement/Trade Guarantee Fund of the exchange for honouring the brokers' commitment in case of failure of a broker to bring in funds.

On payment and receipt of the sum payable on applicants for the amount towards minimum subscription, the company should allot the shares to the applicants as per these guidelines. The registrar to the issue should post the share certificate to the investors or, instruct the depository to credit the depository account of each investor. The allotment of securities should be made not later than 15 days from the closure of the issue, failing which interest at 15 per cent would be paid to the investors.

The cases of applicants who have applied, directly or by post, to the registrar to the issue and have not received allocation, he (the registrar) should arrange to refund the application monies paid by them within the time prescribed.

The brokers and other intermediaries engaged in the process of offering shares through the online system should maintain the following records for a period of five years: (i) orders received, (ii) applications received, (iii) details of allocation and allotment, (iv) details of margin collected and refunded, and (v) details of refund of application money.

Notes The SEBI would have the right to carry out an inspection of the records, books and documents relating to the above, of any intermediary connected with the system and every intermediary in the system should at all times cooperate with the inspection. In addition, the stock exchange(s) has/have the right of supervision and inspection of the activities of its connected member brokers.

3.2.7 Book-Building

Book-building means a process by which a demand for the securities proposed to be issued by a body corporate is elicited and built-up and the price for such securities is assessed for the determination of the quantum of such securities to be issued by means of a notice/circular/advertisement/document or information memoranda or offer document. A company proposing to issue capital through book-building has to comply with the requirements as given in the following paragraphs:

Notes

75 % Book-building Process

In an issue of securities to the public through a prospectus, the option for 75 per cent book-building is available subject to the following:

1. The option of book building is available to all body corporates that are otherwise eligible to make an issue of capital to the public as an alternative to, and to the extend of, the percentage of the issue, which can be reserved for firm allotment. The issuer company can either reserve the securities for firm allotment or issue them through the book-building process. The issue of securities through the book-building process should be separately identified/indicated as 'placement portion category', in the prospectus. The securities available to the public should be separately identified as "net offer to the public". The requirement of minimum 25 per cent of the securities to be offered to the public is also applicable. Underwriting is mandatory to the extent of the net offer to the public. The draft prospectus containing all the information, except the information regarding the price at which the securities are offered, should be filed with the SEBI. One of the lead merchant banker(s) to the issue should be nominated by the issuer company as a book runner and his name should be mentioned in the prospectus. The copy of the draft prospectus, filed with the SEBI, should be circulated by the book runner to the (i) institutional buyers, who are eligible for firm allotment, and (ii) intermediaries, eligible to act as underwriters, inviting offers for subscription to the securities.

2. The draft prospectus circulated should, however, indicate the price band within which the securities are being offered for subscription. The book runner on receipt of the offer should maintain a record of the names and number of securities ordered and the price at which the institutional buyer/underwriter is willing to subscribe to the securities under the placement portion. The underwriter(s) should maintain a record of the orders received by him for subscribing to the issue out of the placement portion. He should aggregate these offers and intimate the same to the book runner. The situational investor should also forward its orders, if any, to the book runner, on receipt of the compaction. The book runner and the issuer company determine the price at which the securities should be offered to the public the issue price for the placement portion and offer to the public could subscribe to the securities. The book runner should, however, have an option to require the under writers to pay all monies with respect to their underwriting commitment in advance. Within two of determination of the issue price, the prospectus should be filed with the ROCs and the issuer company should open two different accounts for collection of application money(ies) – one for the private placement portion and the other for the public subscription. A day prior to the opening of the issue to the public, the book runner should collect the application forms along with the application money(ies) from the institutional buyers and the underwriter to the extent of the securities proposed to be allotted to them/subscribed by them. The allotments for the private placement portion should be made on the second day from the closure of the issue. However, to ensure that the shares allotted under the placement portion and public portion are prepared in all respects, the company may have a new date of allotment, which should be deemed as the date of allotment for the issue of securities through the book-building process. In case the book runner has exercised option to require the underwriter to pay in advance all money(ies) required to be paid with respect to their underwriting commitment by the 11th day of the closure of the issue, the shares allotted as per the private placement category would be eligible to be listed. In case of under-subscription in the net offer to the public, a spillover to the extent of under-subscription should be permitted from the recumbent portion subject to the condition that preference would be given to individuals investors. In case of under-subscription in the placement portion, spillover would be permitted from the net offer public. The issuer company may pay interest on the application money(ies) till the date of allotment or the deemed date of allotment uniformly to all the

Notes

applicants. The book runner and other intermediaries should maintain records of the book-building process. The SEBI has the right to inspect such records.

3.2.8 Green Shoe Option

A Company making an initial public offer of equity shares can avail of the Green Shoe Option (GSO) for stabilizing the post-listing price of its shares. The GSO means an option of allocation of shares in excess of the shares included in the public issue and operating a post-listing price stabilizing mechanism through a Stabilizing Agent (SA). The concerned issuing company should seek authorization for the possibility. If allotment of further issues to the SA at the end of the stabilization period together with the authorization for the public issue in the general meeting of its shareholders. It should appoint one of the merchant bankers/book runners from amongst the issue management team as the SA who would be responsible for the price stabilization process. The SA should enter into an agreement with the issuer company, prior to the filing of the offer document with SEBI, clearly stating all the terms conditions relating to GSO including fees charged expenses to be incurred by him for this purpose. He should also enter into an agreement with the promoter(s) or pre-issue shareholders who would lend their shares, specifying the maximum number of shares that may be borrowed from them, but in no case exceeding 15 per cent of the total issue size. The details of these two agreements should be disclosed in the draft prospects, draft red herring prospectus, red herring prospectus and the final prospectus. They should also be included as material documents for public inspection. The lead book runner or the lead merchant banker in consultation with the SA would determine the amount of shares to be over-allotted with the public issue within the ceiling specified above (i.e. 15 per cent of the issue size). Over-allotment refers to an allocation of shares in excess of the size of the public issue made by the SA out of shares borrowed from promoters in pursuance of a GSO exercised by the issuing company.

The draft prospectus draft red herring/red herring prospectus/final prospects should contain the following additional disclosures:

1. Name of the Stabilizing Agent (SA)
2. Maximum number of shares as well as the percentage of the proposed issue size
3. Period for which the company proposes to avail of the stabilization mechanism
4. Maximum amount of funds to be received by the company in case of further allotment and the use of these additional funds in final document to be filed with the ROCs
5. Details of the agreement/arrangement between the SA and the promoters to borrow shares including, inter alia, (i) name of promoters, (ii) their existing shareholding, (iii) number and percentage of shares to be lent by them, (iv) rights/obligations of each party and so on
6. The final prospectus should additionally disclose the exact number of shares to be allotted pursuant to the public issue, stating separately the number of shares to be borrowed from promoters and over-allotted by the SA and their percentage in relation to the total issue size.

In case of an IPO by an unlisted company/public issue by a listed company, the promoters issuing shareholders holding more than 5 per cent shares may lend shares which are in debenture form only. The SA would borrow to the extent of the proposed over-allotment. The allocation of these shares should be on pro rata basis to all the applicants.

The stabilization mechanism would be available for the period disclosed by the company in prospectus up to a maximum of 30 days from the date when the trading permission was granted by the stock exchange(s).

Notes

The money received from the applicants against the over-allotment in the GSO should be kept in the GSO bank account (as distinct from the issue account) to be used for the purpose of buying shares from the market during the stabilization period. These shares should be credited to the GSO Demat Account. They should be returned to the promoters immediately within two working days after close of the stabilization period.

To stabilize the post-listing prices of the shares, the SA would determine the timing of both of them, the quantity to be bought, the prices at which bought and so on. In case the SA does not allot shares to the extent of their over-allotment from the market, the issuer company should allot them to the extent of the shortfall in dematerialized form to the GSO Demat Account within five days of closure of the stabilization period. These would be returned to the promoters by the SA in lieu of those borrowed from them and the GSO Demat Account would be closed. The company would be making a final listing application in respect of such shares to all the concerned stock exchanges where the shares allotted in the public issue are listed. The provisions relating to preferential issues would not be applicable to such allotment. The shares returned to the promoters either case would be subject to the remaining lock-in period.

The SA would remit the issue price (i.e. further shares allotted by the issuer company to the Demat Account) to the company from the GSO bank account. The remaining balance, (net of addition of expenses incurred by the SA, would be transferred to the investor protection fund of concerned stock exchange and the GSO Bank Account would be closed.

The SA should submit a daily report to the stock exchange(s) during the stabilization period, should also submit a final report signed by him/company to the SEBI in the specified form together with (1) a depository statement for the GSO Demat Account for the stabilization period indicating flow of shares into and from the account and (2) an undertaking by the SA and countersigned by depository(ies) in respect of confirmation of location in shares returned to the promoters in lieu of shares borrowed from them for stabilization purposes.

The SA should maintain for at least three years from the date of the end of the stabilizing period a register in respect of each issue with GSO, in which he acts as a SA containing the following details: (1) price, date and time of each transactions, (2) promoters and the number of shares borrowed find each and (3) allotments made.

Self Assessment

State whether the following statements are true or false:

3. The OTC do not permits small companies to raise funds through its exchange.
4. The broker would refund the margin money, collected earlier, within three days of receipt of basis of allocation to the applicants who did not receive allocation.

3.3 Primary Market Intermediaries in India

A number of intermediaries are associated with activities of the primary market in India. They are: Merchant Bankers, Underwriters, Bankers to an Issue, Brokers to an Issue, Registrars and Share Transfer Agents and Debenture Trustees. A brief discussion of tasks and obligations of each of these participants, as per the SEBI guidelines is brought out below:

3.3.1 Merchant Bankers

Merchant bankers in India, akin to 'accepting and issue houses' of the UK and 'Investment banks' of the US, offer a package of financial services relating to the issue. According to the SEBI

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(Merchant Bankers) Regulation Act, 1992, "a merchant banker is a person who is engaged in the business of issue management either by making arrangements regarding selling, buying or subscribing to securities or acting as manager, consultant, advisor or rendering corporate advisory service in relation to such 'issue management'."

The SEBI has classified 'merchant bankers' into four categories:

- ***Category I Merchant Bankers:*** These merchant bankers can act as issue manager, advisor, consultant, underwriter and portfolio manager.
- ***Category II Merchant Bankers:*** These merchant bankers can act as advisor, consultant, underwriter and portfolio manager. They cannot act as issue manager on their own but can act as co-manager.
- ***Category III Merchant Bankers:*** These bankers can act as advisor, consultant and underwriter only. They can neither undertake issue management business on their own nor act as co-manager.
- ***Category IV Merchant Bankers:*** These bankers can merely act as consultant or advisor to an issue of capital.

As per the SEBI guidelines introduced on September 5, 1997, all the merchant bankers below the Category I would stand abolished. The guidelines obligated the merchant bankers functioning below the Category I to upgrade themselves to Category I. Accordingly, the merchant bankers, presently engaged in underwriting, portfolio management, besides issue management, would have to get separate registration as portfolio managers, while underwriting business could be carried on without additional registration.

Tasks and Responsibilities of Merchant Bankers

The SEBI has laid down the following guidelines regarding duties and obligations of the merchant bankers:

- Merchant bankers shall have to be compulsorily registered with the SEBI. The following conditions have to be fulfilled for registration by the SEBI:
  - Merchant bankers must have a minimum net worth of ₹ 5 crore. Those acting only as portfolio managers must have a net worth of ₹ 50 lakh. Those acting only as underwriters must have a net worth of ₹ 20 lakh.
  - Merchant bankers should have adequate and necessary infrastructure for effective performance of their activities.
  - Merchant bankers should have expertise in the areas of finance, law and management and are not involved in any litigation relating to the securities market.
  - Every merchant banker shall pay a sum of ₹ 5 lakh as registration fees within 15 days of receipt of intimation from the SEBI.
- The merchant banker shall enter into agreement with the issuing company, spelling out their mutual rights, obligations and liabilities pertaining to the issue. A copy of the agreement is to be submitted to the SEBI at least one month before opening of the issue for subscription.
- The merchant banker will have to undertake a minimum underwriting obligation of 5% of total underwriting commitment or ₹ 25 lakh; whichever is less, on his own or through its associate.

Notes

- The merchant banker cannot carry on any business other than that of the securities market.
- The merchant banker is required to submit to the SEBI 'Due Diligence Certificate' at least two weeks before the opening of the issue for subscription. The Certificate has to be given with respect to the following:
  - That the documents contain all the details relevant to the issue.
  - That all legal requirements pertaining to the issue have been fully compiled with.
  - That all disclosures are true, fair and adequate to enable the investors to make a well-informed decision regarding investment in the proposed issue.

  The above certificate should be based on the basis of the verification of the contents of the prospectus/letter of offer regarding the issue and the reasonableness of the views expressed therein.
- The merchant banker is under obligation to submit to the SEBI various documents relating to the issue, draft prospectus/letter of offer and other literature to be circulated to the investors/shareholders, etc., at least two weeks before the date of filing them with the Registrar of Companies and regional stock exchanges. It has to ensure that all the modifications and suggestions made by the SEBI regarding the above documents have been duly incorporated.
- The merchant banker shall keep and maintain a copy of balance sheet at the end of each accounting period, profit and loss account for that period, a copy of the auditor's report on the accounts for that period and a statement of financial position. It has to intimate to the Board the place where the books of accounts, records and documents are maintained. Such documents shall have to be preserved for a minimum period of 5 years.
- The merchant banker shall have to furnish to the Board half-yearly unaudited financial results when required by the SEBI so that the farmer's capital adequacy is monitored.
- The merchant banker is required to make disclosure of the following to the SEBI:
  - Its responsibilities regarding the management of the issue.
  - Any change in the information/particulars previously furnished with the SEBI having a bearing on certificate of registration granted to it.
  - Details regarding breach of capital adequacy norms.
  - Names and addresses of the companies whose issues it has managed or has been associated with.
  - Information pertaining to its activities as manager, underwriter, consultant or advisor to the issue.

3.3.2 Underwriters

A company intending to garner funds from the market is not certain about the availability of the desired quantum of funds through subscription of securities. To ensure the certainty, some sort of institutional arrangement needs to be made whereby the issuing company is given the guarantee of purchase of all unsubscribed securities. This arrangement is akin to insurance that provides protection against the failure of an issue of capital to the public. Such an insurance arrangement to ensure success of the issue is termed as 'underwriting'. Underwriters, therefore, undertake the guarantee of buying the shares placed before the public in the event of non-subscription of the securities. Thus, an issuing company has to enter into an agreement with an underwriter who may be individual or institution for underwriting the issue. The obligation of the underwriter as per the agreement arises when the event of non-subscription of issues by the public takes place.

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Underwriting may take different forms depending on nature of the agreement entered into between the issuer and the underwriter. Thus, there may be standby underwriting, outright purchase, joint underwriting, syndicate underwriting and sub-underwriting.

Under standby underwriting, underwriters enter into an agreement with an issuing company to take all such securities as are not subscribed in the market or to buy certain portion of the security issue. This type of underwriting is very popular in India.

In outright purchase, underwriters buy the entire issue outright and make the payment thereof. Thereafter, they arrange to sell them to investors through their own organization. This type of underwriting is very popular in the US.

Joint underwriting takes place where capital issue is large and risk is too high and in such cases, the issuing company approaches more than one underwriter. Each underwriter undertakes to guarantee for the issue of a certain portion of the whole issue offered to the public and thereby shares the risk proportionately.

In syndicate underwriting, a number of underwriters enter into an agreement among themselves to underwrite an issue particularly the one which is quite large and/or potentially risky. Syndicate underwriting seems to be akin to joint underwriting. But actually this is not so. In the case of joint underwriting, underwriters are approached by the issuer for underwriting an issue and no agreement takes place among the underwriters themselves. In contrast, in the case of syndicate underwriting, underwriters enter into a formal agreement among themselves to undertake the guarantee of buying shares of debentures of a public issue.

Sub-underwriting of an issue takes place when an underwriter enters into agreement with some other underwriters to underwrite the whole or part of the issue underwritten by him. In this case, sub-underwriters do not enter into agreement with the 'issuing company'.

3.3.3 Bankers to an Issue

Bankers represent an important segment of Indian primary market. They carry out the function of accepting applications and application moneys from investors in respect of securities and refunding of application money to the applicants to whom securities could not be allotted. They also participate in the payment of dividends by companies.

Tasks and Responsibilities of Bankers to an Issue

The following guidelines with respect to duties and responsibilities of bankers to an issue have been laid down by the SEBI:

- A banker intending to act as banker to an issue can do so by getting itself registered with the SEBI and obtaining a certificate of registration to that effect. The SEBI issues the certificate on being satisfied about the availability of the necessary infrastructure, communication and data processing facilities with the applicant and the adequacy of manpower to effectively perform activities relating to the issue.
- An annual registration fee of ₹ 2.5 lakh for the first two years from the date of initial registration and ₹ 1 lakh for the third year has to be paid by the banker to an issue to the SEBI. The renewal fees are ₹ 1 lakh annually for the first two years and ₹ 20,000 for the third year.
- A banker is required to enter into an agreement with the issuing company, specifying number of centres at which applicants from investors will be collected and the time within which statements regarding applications and money received will be sent to the registrars to the issue by the designated branches of the banker to the issue.

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- A banker to the issue has to maintain books of accounts, records and documents for a minimum period of at least three years regarding number of applications, names of investors, time within which applications received were forwarded to the issuing company/ registrar to the issue and dates and amount of refund to investors.
- A banker to the issue is required to furnish to the SEBI detailed information pertaining to number of applications received, number of issues for which he acted as banker to the issue, the dates on which applications from investors were forwarded to the issuing company/registrar to the issue and amount of refund to investors.
- A banker to the issue has to observe all the codes of conduct ordained by the SEBI for the merchant bankers and underwriters. Besides, it has to adhere to the following norms laid down by the SEBI:
  - Make all efforts to protect the interests of investors;
  - Observe high standards of integrity and fairness in the conduct of the business;
  - Exercise due diligence, ensure proper care and exercise independent professional judgement;
  - Not to keep blank application forms bearing broker's stamp at the bank premises or at the entrance of the bank;
  - Not to accept applications after office hours, on bank holidays or after the date of the closure of the issue;
  - Not to act any time in collusion with other agents in a manner detrimental to the interest of small investors; and
  - Abide by all acts, rules, regulations, notifications, directions, circulars, instructions and guidelines issued by the Government, the RBI, Indian Banks' Association and SEBI that are relevant to his operation as banker to an issue.

3.3.4 Brokers to an Issue

Brokers to an issue represent intermediaries who are concerned with procuring the subscription to the issue from prospective investors across the country. In this way, they serve as a vital link between the issuer and the prospective investors and assist in speedy subscription of the issue by the public.

An issuing company can appoint as many number of brokers as it wants provided the stock exchange of which the issuer is a member permits and the listing requirements are fulfilled. A copy of the consent letter should be filed with the Registrar of Companies alongwith a copy of the prospectus stating the names and addresses of the brokers to the issue.

The brokers to the issue must be endowed with the expertise, professional competence and must be honest so as to be able to carry out the various functions of an issue.

The issuing company has to pay brokerage according to the provisions of the Companies Act and rules and regulations the agreement between the brokers and the company and guidelines prescribed by the SEBI. Maximum brokerage rate, applicable to all types of industrial securities, whether underwritten or not, is 1.5 percent. The brokers will have to meet all mailing costs, canvassing expenses and all other out-of-pocket expenses relating to the subscription of the issue out of their brokerage. On private placement, the listed company can pay brokerage at the maximum rate of 0.5%.

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3.3.5 Registrar to an Issue and Transfer Agent

Registrar and transfer agent are the two categories of intermediaries who actively participate in the new issue activity of a company. The Registrar performs the functions of collecting applications from prospective investors, keeping a record of the applications and moneys received from the investors, assisting the issuing company in the determination of the basis of allotment of securities, processing and dispatching of allotment letters and refund orders, share and debenture certificates and other documents related to the issue and acting as Depository Participants (DPs).

Transfer Agent, on the other hand, carries out the activities, such as maintaining the records of holders of securities of the company for and on behalf of the company, handling all matters relating to transfer and redemption of securities of the company and acting as Depository Participants (DPs).

3.3.6 Debenture Trustees

A company contemplating to issue debentures to raise long-term funds from the market has to appoint a trustee to safeguard the interests of the debenture holders. The following may be appointed as debenture trustee:

1. A scheduled bank, or
2. A public financial institution, as defined in Section 4-A of the Companies Act, 1956, or
3. An insurance company, or
4. A body corporate.

Self Assessment

Fill in the blanks:

5. ..... and ..... are the two categories of intermediaries who actively participate in the new issue activity of a company.
6. A company contemplating to issue debentures to raise ..... funds from the market has to appoint a trustee to safeguard the interests of the debenture holders.

3.4 Secondary Market

Secondary market is a market where the sale of previously issued securities takes place. Thus, secondary market provides a trading platform for the already issued securities of governments, semi-governments and firms. It is a two-way market in which the investors and stockbrokers are just as likely to be sellers as buyers.

The redeeming features of the secondary markets are:

1. A secondary market is a market for already existing long-term securities of governments, semi-governments and corporate enterprise. This market exists only if someone creates it. There are two types of market creators-dealers and brokers. Dealers stand ready to buy and sell at quoted prices. They hold on to the securities until someone else comes along wishing to buy them. In contrast, brokers do not themselves buy or sell the securities. They, instead of buying the securities, would find someone willing to buy them.
2. The secondary market can be wholesale and retail. The wholesale market is the market in which professionals, including institutional investors trade with one another. Transactions

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in this market are usually large. The retail market is the market in which the individual investors buy and sell securities.

3. Exchanges in the wholesale secondary market for capital securities may take place in either of the two markets, viz., Over-the counter market (OTC) and organized exchange market. Where the organisation is more structured and communication is often face-to-face, the market is known as an organised exchange. Generally, the secondary market for government securities is an OTC market, and that the secondary market for corporate equities consists of both OTC markets and exchanges. The wholesale market for bonds in the US is principally an OTC market; fewer than 10% of all issues traded in the stock exchanges.

Thus, an organised exchange market is characterised as auction market that uses floor traders who specialise in particular stocks. Exchange rules govern trading to ensure the efficient and legal operation of the exchange and the exchange board constantly reviews these rules to ensure that they result in competitive trading. In about 90% of trades, the specialist matches buyers with sellers. In the other 10%, the specialist may intervene by taking ownership of the stock themselves or by selling stock from inventory.

Notes Unlike organised exchanges, OTC markets have market makers. Rather than trading stocks in an auction format, they trade on an electronic network where bid and ask prices are set by market makers.

3.4.1 Importance of Secondary Market

The secondary market plays crucial role in economic and industrial development of a country through promoting capital formation and efficient allocation of capital. Secondary market promotes capital formation by assisting in the effective mobilisation of savings and their canalisation into appropriate avenue of investment. It does by providing an organized market in diverse types of securities to suit the varying notions and whims of a vast mass of savers about liquidity, profitability and risk element in their investments. The opportunity of constant evaluation of returns on one's investment compared to others, the liquidity that is imported to investment in fixed capital and price continuity that it ensures, instil confidence in the minds of savers. On the other hand, by creating conditions which reasonably ensure availability of financial resources for creating real capital, whether in private or public sector, they give impetus to development.

- A secondary market increases economic efficiency. An organised exchange helps allocate capital more efficiently by establishing fair prices for securities and by minimising the costs of buying and selling them. A secondary market also helps in directing flow of savings into promising industries and checks the flow of capital in uneconomic and less profitable ventures. This, the secondary market seeks to achieve through keeping an eye on the exchanges. A permanent surge in share price of a particular industry suggests that more capital can be absorbed by the industry with the advantage. On the contrary, if share price in an industry registers continued fall, it suggests that the industry cannot absorb the capital profitably. Through price mechanism, the secondary market prevents gluts and scarcities of capital as between different industries and avoids misalignments between supply of capital and the demands of industry and effects economies in the use of capital.
- Secondary market also facilitates an investor to shift from one type of investment to another according to his investment priorities without any significant depreciation in its real value. Accordingly, an investor does not get tied for the better or for the worse, to the

particular enterprise whose shares he buys. It is this assurance that he does not have to sink or swim with it that makes him willing to venture into investment. Further, by widening the opportunities for investment, a secondary market enables investors to spread their risk by acquiring securities of different industries, and in varying proportions, which is an essential concomitant to modern investment.

- A secondary market helps promote 'democratic capitalism'. By distributing the ownership of securities more widely among the public, a securities market ensures that the ownership of business is not confined to a small number of wealthy families or to big industrial-financial conglomerates.
- An efficient secondary market makes access to international capital easier. Foreign investors – both direct and portfolio investors – will be encouraged to invest because of their strong preference for investment in countries where their funds are complementing, rather than replacing, domestic savings.

Self Assessment

State whether the following statements are true or false:

7. Secondary market is a market where the sale of previously issued securities takes place.
8. Secondary market is a three-way market in which the investors and stockbrokers are just as likely to be sellers as buyers.

3.5 Stock Market

Stock exchange is the term commonly used for a secondary market, which provide a place where different types of existing securities such as shares, debentures and bonds, government securities can be bought and sold on a regular basis. A stock exchange is generally organised as an association, a society or a company with a limited number of members. It is open only to these members who act as brokers for the buyers and sellers. The Securities Contract (Regulation) Act has defined stock exchange as an "association, organisation or body of individuals, whether incorporated or not, established for the purpose of assisting, regulating and controlling business of buying, selling and dealing in securities".

The main characteristics of a stock exchange are:

1. It is an organised market.
2. It provides a place where existing and approved securities can be bought and sold easily.
3. In a stock exchange, transactions take place between its members or their authorised agents.
4. All transactions are regulated by rules and by laws of the concerned stock exchange.
5. It makes complete information available to public in regard to prices and volume of transactions taking place every day.

It may be noted that all securities are not permitted to be traded on a recognised stock exchange. It is allowed only in those securities (called listed securities) that have been duly approved for the purpose by the stock exchange authorities. The method of trading nowadays, however, is quite simple on account of the availability of on-line trading facility with the help of computers. It is also quite fast as it takes just a few minutes to strike a deal through the brokers who may be available close by. Similarly, on account of the system of scrip-less trading and rolling settlement, the delivery of securities and the payment of amount involved also take very little time, say, 2 days.

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3.5.1 Functions of a Stock Exchange

The functions of stock exchange can be enumerated as follows:

1. ***Provides ready and continuous market:*** By providing a place where listed securities can be bought and sold regularly and conveniently, a stock exchange ensures a ready and continuous market for various shares, debentures, bonds and government securities. This lends a high degree of liquidity to holdings in these securities as the investor can encash their holdings as and when they want.

2. ***Provides information about prices and sales:*** A stock exchange maintains complete record of all transactions taking place in different securities every day and supplies regular information on their prices and sales volumes to press and other media. In fact, nowadays, you can get information about minute to minute movement in prices of selected shares on TV channels like CNBC, Zee News, NDTV and Headlines Today. This enables the investors in taking quick decisions on purchase and sale of securities in which they are interested. Not only that, such information helps them in ascertaining the trend in prices and the worth of their holdings. This enables them to seek bank loans, if required.

3. ***Provides safety to dealings and investment:*** Transactions on the stock exchange are conducted only amongst its members with adequate transparency and in strict conformity to its rules and regulations which include the procedure and timings of delivery and payment to be followed. This provides a high degree of safety to dealings at the stock exchange. There is little risk of loss on account of non-payment or non-delivery. Securities and Exchange Board of India (SEBI) also regulates the business in stock exchanges in India and the working of the stock brokers. Not only that, a stock exchange allows trading only in securities that have been listed with it; and for listing any security, it satisfies itself about the genuineness and soundness of the company and provides for disclosure of certain information on regular basis. Though this may not guarantee the soundness and profitability of the company, it does provide some assurance on their genuineness and enables them to keep track of their progress.

4. ***Helps in mobilisation of savings and capital formation:*** Efficient functioning of stock market creates a contributory climate for an active and growing primary market. Good performance and outlook for shares in the stock exchanges imparts buoyancy to the new issue market, which helps in mobilising savings for investment in industrial and commercial establishments. Not only that the stock exchanges provide liquidity and profitability to dealings and investments in shares and debentures. It also educates people on where and how to invest their savings to get a fair return. This encourages the habit of saving, investment and risk-taking among the common people. Thus it helps mobilising surplus savings for investment in corporate and government securities and contributes to capital formation.

5. ***Barometer of economic and business conditions:*** Stock exchanges reflect the changing conditions of economic health of a country, as the shares prices are highly sensitive to changing economic, social and political conditions. It is observed that during the periods of economic prosperity, the share prices tend to rise. Conversely, prices tend to fall when there is economic stagnation and the business activities slow down as a result of depressions. Thus, the intensity of trading at stock exchanges and the corresponding rise on fall in the prices of securities reflects the investors' assessment of the economic and business conditions in a country, and acts as the barometer which indicates the general conditions of the atmosphere of business.

6. ***Better Allocation of funds:*** As a result of stock market transactions, funds flow from the less profitable to more profitable enterprises and they avail of the greater potential for growth. Financial resources of the economy are thus better allocated.

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3.5.2 Advantages of Stock Exchange

Having discussed the functions of stock exchange, let us look at the advantages which can be outlined from the point of view of (a) Companies, (b) Investors, and (c) the Society as a whole.

(a) To the Companies

(i) The companies whose securities have been listed on a stock exchange enjoy a better goodwill and credit-standing than other companies because they are supposed to be financially sound.

(ii) The market for their securities is enlarged as the investors all over the world become aware of such securities and have an opportunity to invest.

(iii) As a result of enhanced goodwill and higher demand, the value of their securities increases and their bargaining power in collective ventures, mergers, etc. is enhanced.

(iv) The companies have the convenience to decide upon the size, price and timing of the issue.

(b) To the Investors

(i) The investors enjoy the ready availability of facility and convenience of buying and selling the securities at will and at an opportune time.

(ii) Because of the assured safety in dealings at the stock exchange the investors are free from any anxiety about the delivery and payment problems.

(iii) Availability of regular information on prices of securities traded at the stock exchanges helps them in deciding on the timing of their purchase and sale.

(iv) It becomes easier for them to raise loans from banks against their holdings in securities traded at the stock exchange because banks prefer them as collateral on account of their liquidity and convenient valuation.

(c) To the Society

(i) The availability of lucrative avenues of investment and the liquidity thereof induces people to save and invest in long-term securities. This leads to increased capital formation in the country.

(ii) The facility for convenient purchase and sale of securities at the stock exchange provides support to new issue market. This helps in promotion and expansion of industrial activity, which in turn contributes, to increase in the rate of industrial growth.

(iii) The Stock exchanges facilitate realisation of financial resources to more profitable and growing industrial units where investors can easily increase their investment substantially.

(iv) The volume of activity at the stock exchanges and the movement of share prices reflect the changing economic health.

3.5.3 Speculations in Stock Exchange

The buyers and sellers at the stock exchange undertake two types of operations, one for speculation and the other for investment. Those who buy securities primarily to earn a regular income from such investment and possibly make some long-term gain on account of price rise in future are called investors. They take delivery of the securities and make full payment of the price. Such transactions are called investment transactions.

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But, when the securities are bought with the sole object of selling them in future at higher prices or these are sold now with the intention of buying at a lower price in future, are called speculation transactions. The main objective of such transactions is to take advantage of price differential at different times. The stock exchange also provides for settlement of such transactions even by receiving or paying, as the case may be, just the difference in prices.

Example: Rashmi bought 200 shares of Moser Baer Ltd. at ₹ 210 per share and sold them at ₹ 235 per share. He does not take and give delivery of the shares but settles the transactions by receiving the difference in prices amounting to ₹ 5,000 minus brokerage. In another case, Mohit bought 200 shares of Seshasayee Papers Ltd. at ₹87 per share and sold them at ₹ 69 per share. He settles these transactions by simply paying the difference amounting to ₹ 3600 plus brokerage. However, now-a-days stock exchanges have a system of rolling settlement. Such facility is limited only to transactions of purchase and sale made on the same day, as no carry forward is allowed.

Though speculation and investment are different in some respects, in practice it is difficult to say who is a genuine investor and who is a pure speculator. Sometimes even a person who has purchased the shares as a long-term investment may suddenly decide to sell to reap the benefit if the price of the share goes up too high or do it to avoid heavy loss if the prices starts declining steeply. But he cannot be called a speculator because his basic intention has been to invest. It is only when a person's basic intention is to take advantage of a change in prices, and not to invest, then the transaction may be termed as speculation. In strict technical terms, however, the transaction is regarded as speculative only if it is settled by receiving or paying the difference in prices without involving the delivery of securities. It is so because, in practice, it is quite difficult to ascertain the intention. Some people regard speculation as nothing but gambling and consider it as an evil. But it is not true because while speculation is based on foresight and hard calculation, gambling is a kind of blind and reckless activity involving high degree of chance element. No only that, speculation is a legal activity duly recognised as a prerequisite for the success of stock exchange operations while gambling is regarded as an evil and a punishable activity. However, reckless speculation may take the form of gambling and should be avoided.

Did u know? Earlier trading in the stock exchange was held face-to-face (called pit-trading) without the use of computers and the advanced computer software as it is today. In those times, transactions were settled (i.e., actual delivery of shares, through share certificates, by the seller and payment of money by the buyer) in the stock exchange, only on a fixed day of the week, say on a Saturday, or a Wednesday irrespective of which day of the week the shares were bought and sold. This was called 'Fixed Settlement'.

Self Assessment

Fill in the blanks:

9. Good performance and outlook for shares in the stock exchanges imparts ..... to the new issue market.

10. ..... reflect the changing conditions of economic health of a country, as the shares prices are highly sensitive to changing economic, social and political conditions.

3.6 Investment Procedure in Stock Market

Exchanges have a trading floor where the buying and selling of securities take place. Individuals or firms (brokers) are required to purchase a seat or membership of the stock exchange in order

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to obtain the right to trade securities there. The trading that takes place on the floor of the stock exchange resembles an auction, as members trying to sell a client's stock strive to obtain the highest price possible, while those representing the buyer-clients strive to obtain the lowest price possible. When members announce their intention to buy or sell a certain number of shares of a certain stock, they receive bids or offers as the case may be from other members. Sellers accept the highest bid or hold shares until an acceptable bid is offered. A member can act as buyer or seller.

Only members can transact business at the posts, where securities are traded. The 'open outcry' offers a relatively simple method of trade-matching that has been used for centuries, in commodities markets. In this, buyers and sellers match themselves up directly by calling out bid and offer price offers in the trading 'pit'. The physical order matching system is now emulated by the new screen based exchanges. Trading pits are rapidly losing ground to the electronic system. The new electronic media is used mainly by market-makers and corporates, to conduct large-scale transactions.

Online trading systems are gaining popularity at the retail level as well. The more progressive stock exchanges have electronic quotation systems that provide immediate price quotations. Companies that wish to have their prices quoted must meet specific requirements on minimum assets, capital and number of shareholders. Specialists take positions in specific stocks and stand ready to buy or sell these stocks. They are expected to maintain a fair and orderly market, in the securities assigned to them. Floor brokers execute stock transactions for their clients.

Transactions are facilitated, by market-makers who stand ready to buy or sell specific stock in response to customers' orders made through telecommunications network. Liquidity of the stock market is enhanced by market-makers, because they are required to make a market at all times in an effort to stabilise prices. Whereas, brokers on the exchanges match buyers and sellers, market makers serve not only as brokers, but also as investors. Marketmakers have a bid/ask spread, to charge for transactions they execute. Consequently, transaction costs become higher.

The market is created, from the flow of orders to buy or sell each stock. Investors communicate their orders to brokers by specifying name of the stock, whether to buy or sell it, number of shares to be bought or sold, and whether the order is a market order i.e. transact at the best possible price or limit order i.e. limit placed on the price at which a stock can be purchased or sold. In a limit order, investors may obtain a stock at a lower price but there is no guarantee that the price will reach that limit. Orders may be placed for a day or longer periods.

Investors can purchase stock on margin (with borrowed funds) by signing up for margin account with their broker. Investors can sell the stock short or short the stock when they anticipate that the price will decline. When they sell short, they are essentially borrowing the stock from an investor to whom they will have to provide it. Short sellers earn the difference between what they initially sold the stock for and what they pay to obtain the stock. There is also the brokerage mechanism, which is employed in thin markets for heterogeneous instruments. This is quite adequate for traders with little immediacy or liquidity requirement, who trade frequently. Brokers use their knowledge of clientele to find buyers and sellers, or are approached by brokers' clients, without taking items on to their books. In an extreme case, where the process fails, an auction may be arranged. Small company shares are usually traded on a 'matched bargains' basis, by small regional stockbrokers. Matching methods are used, to make markets in equities and to determine opening prices for auctions. Client 'limit orders' which specify the size of the trade and an acceptable price range, are collected before the market opens. These buy and sell orders are then aggregated and the market clearing price is found at the level at which net demand is close to zero. A market-maker has the option of using this aggregate demand/supply schedule as an offer curve and can execute these limit orders against his own inventory. Liquidity in these markets is maintained by dealers in return for privileges, which they receive from the

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stock exchange. There are two main mechanisms for achieving liquidity – the quote-driven and the order-driven. In the quote-driven markets, dealers announce a 'bid' price at which they stand ready to buy up to some maximum quantity and an 'ask' (or offer) price at which they are prepared to sell. They then meet orders out of their inventory, adjusting prices accordingly.

In order-driven markets, dealers (known as intermediaries) submit limit orders on a continuous basis to the stock exchange computer. A limit order is an instruction to buy (or sell) shares up to specified maximum at a price equal or below (or above) the specified level. These orders are 'crossed' or executed against existing limit orders if possible, but otherwise added to the order book, which forms the price schedule for the market. Similarly, clients can submit limit orders. They can also submit market orders, which are unconditional as to price, and are immediately matched against the most favourable limit order price, on the computer. An individual wishing to buy or sell a security would contact salesperson at a brokerage firm and place an order. The order must specify the name of the issuer of the security, types of security, whether order is for purchase or sale, the order size, type of order, and the price and length of time the order is to be outstanding. Under type of order, market, limit, short sale, stop orders are to be specified.

Order size trading on the stock markets, is usually carried out in round lots. A round lot for most common stocks is considered to be hundred shares. An odd lot is a quantity different from hundred shares. Orders can be for both, round or odd lots. Generally, odd lots have higher transaction costs. For securities other than common stock or ordinary shares, there is no differential categorization by order size, but there may be a minimum order size.

Market orders are the most common type of orders placed by an individual investor. A market order is an order to buy (or sell) at the least (or highest) price currently available. The purchase or sale price can differ from the bid or ask. First, consider a market buy order. Other investors could simultaneously be placing market orders to sell, and the shares could be traded inside the bid-ask price. Second, the bid-asks spread could change, between the time the order is placed and the time it is executed, because of other preceding trades or because new information caused a change in the bid-ask spread. Thus, an investor using a market order is insuring execution with some uncertainty as to price.

Limit orders are orders to buy or sell at a minimum or maximum price. Limit orders control the price paid or received, but the investor has no way of knowing, when and if the order will be filled. A limit order may be utilized by an investor, who observes the price to be varying within a range and tries to sell or buy the stock at a favourable price within the range, and is willing to bear the risk of not filling the order.

Short sale investors can sell shares they do not own. This type of trade is referred to, as a short sale. When an investor short sells a security, the security is physically sold. Since the investor does not own the security, the brokerage firm borrows it from another investor or lends it to the investor. The securities borrowed normally come from the securities held, at the brokerage firm, for other investors. Securities, kept at a brokerage firm by investors, are referred to as securities registered 'in street name'. If the firm does not possess the shares they desire to sell, they would borrow the shares from someone else, often another broker. The investor, whose shares were borrowed and sold, normally would not know that the transaction had occurred and would definitely not know who had borrowed the shares. Since the shares are physically sold, the company would not pay dividend to the investor whose shares were borrowed, but instead pay the purchaser of the shares. For the investor, whose shares are borrowed, not to be hurt by the short sale, he or she must receive the dividends. The person, who sold the shares short, is responsible for supplying the funds, so that the person, whose shares were borrowed, can receive any dividend paid on the stock that was sold short. At a future time, the short seller repurchases the shares, and replaces the shares that were borrowed.

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Stop orders are activated, only when the price of the stock reaches or passes through a predetermined limit. The price that activates the trade is called stop price. Once a trade takes place at the stop price, the order becomes a market order. Thus, a stop loss order can be viewed as a conditional market order. A stop buys order becomes a market buy, when the trades of others equal or exceed the stop price. The investor might place a stop loss order increasing the stop price, if the shares continue to rise. As with all market orders, the actual price the shares will trade at is uncertain because the trade prices might move below the stop price before the stop loss order can be executed.

A stop buy order is often used, in conjunction with a short sale. Since the share must be replaced following a short sale, any price increase harms the short seller. A stop buy order serves to limit the amount of loss, the short seller can incur.

An investor must specify the length of time an order is outstanding for orders other than market orders. A day order instructs the broker to fill the order by the end of the day. If, it is not filled by end of the day, it is automatically cancelled. If the investor does not specify the length of time, it is assumed to be, a day order. A week or month order is to be filled by the end of that period or cancelled. Good until cancelled orders, remain outstanding until the investor specifically cancels the order. Fill or kill order instructs the broker to fill the order immediately or to kill the order. Spot transactions require settlement by delivery and payment on the date of contract, or next day. A clearing house facilitates the clearing of contracts, delivery of securities, and payments between members.

Stocks, not listed on the organised exchanges, are traded in the over-the-counter (OTC) market. Like the organised exchanges, the OTC market also facilitates secondary market transactions but does not have a trading floor. Instead, buy and sell orders are completed through a telecommunication network. Because there is no trading floor, there is no need to buy a seat to trade on this exchange, but it is necessary to register with it.

Trading on stock exchanges is done through brokers and dealers. All members can act as brokers and for this purpose they have to maintain security deposits. Brokers act as agents, buying and selling or others for which they receive brokerage commission at stipulated rates. Dealers act as principals and sell securities on their own accounts.

However, members cannot enter into contract with any person other than a member without prior permission the governing body. Given below are the key members of the stock exchanges:

1. ***Commission Broker:*** The commission broker executes buying and selling on the floor of the stock exchange.
2. ***Floor Broker:*** Floor brokers are not many. They execute orders for fellow members and receive a share brokerage commission charged by a commission broker to his/her constituent.
3. ***Tataniwala:*** He/she is a jobber or specialist in selected shares he/she 'makes the market' i.e. brings continuity to dealings. They specialize in stocks which are traded inactively.
4. ***Dealer in non-cleared securities:*** He/she deals in securities which are not on the active list.
5. ***Odd-lot Dealer:*** He/she specializes in buying and selling in amounts which are less than present trading units. They buy and sell odd lots, make them up into marketable trading units. These dealers receive commission. Their earnings come from the difference between the process at which they buy and sell. The odd-lot dealer has become an important operator since the growth of new issues. When the number of applicants for a new issue is large, shares may be allotted in lots which are smaller than prescribed lots. The odd-lot dealer makes profit on the large numbers of odd-lots by buying and selling at different prices.

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6. ***Budiwalas:*** He/she specializes in buying and selling simultaneously in different markets. The difference between the buying prices in another market constitutes his profit. However, he can transact such business only if a security is traded on more than one stock exchange and if exchanged telephonically or ax-linked. In India, arbitraging has become a growing business. Arbitraging requires prior application to the governing body "in order to avoid" the evil of "joint account" with members of other stock exchanges and consequent involvement of one exchange in the difficulties of another.

7. ***Security Dealer:*** This dealer specializes in trading in government securities. He/she mainly acts as a jobber and takes the risks inherent in ready purchase and sale of securities. The government securities are over the counter and not on the floor. They maintain daily contacts with the Reserve Bank of India and common banks and other financial institutions. As a result of their activities, government securities are quoted finely.

Margin Trading

Margin trading occur when investors who purchase stocks on margin borrow part of the purchase price of the stock from their brokers, and leave purchased stocks with the brokerage firm in street name because the securities are used as collateral for the loan. The interest rate of the margin credit charged by the broker is typically 1.5% above the rate charged by the bank making the loan. The bank rate (called the call money rate) is normally about 1% below the prime rate.

1. ***Percentage margin:*** The ratio of the net worth, or "equity value" of the account to the market value of the securities.

2. ***Maintenance margin:*** The required proportion of your equity to the total value of the stock. It protects the broker if the stock price declines.

3. ***Margin call:*** If the percentage margin falls below the maintenance margin, the broker issues a margin call requiring the investor to add new cash or securities to the margin account. If the investor fails to provide the required funds in time, the broker will sell the collateral stock to pay off the loan.

Self Assessment

State whether the following statements are true or false:

11. Exchanges have a trading floor where the buying and selling of securities take place.

12. Individuals or firms (brokers) do not require to purchase a seat or membership of the stock exchange in order to obtain the right to trade securities there.

13. The trading that takes place on the floor of the stock exchange resembles an auction, as members trying to sell a client's stock strive to obtain the highest price possible, while those representing the buyer-clients strive to obtain the lowest price possible.

3.7 Role of NSCCL

National Securities Clearing Corporation Ltd. (NSCCL) is a wholly owned subsidiary of NSE and was incorporated in August 1995. It was the first clearing corporation to be established in the country and also the first clearing corporation in the country to introduce settlement guarantee. It was set up with the following objectives to:

1. Bring and sustain confidence in clearing and settlement of securities;

2. Promote and maintain, short and consistent settlement cycles;

Notes

3. Provide counter-party risk guarantee, and
4. Operate a tight risk containment system. The NSE (National Stock Exchange) is a Mumbai-based stock exchange.

NSE (National Stock Exchange) is the largest stock exchange in India and the third largest in the world in terms of volume of transactions. The NSE (National Stock Exchange) is mutually-owned by a set of leading financial institutions, banks, insurance companies and other financial intermediaries in India but its ownership and management operate as separate entities. The NSE has remained a lead player in the modernization of India's capital and financial markets. Towards this end the NSE (National Stock Exchange) set up the first clearing corporation in India – the NSCCL (National Securities Clearing Corporation Ltd). The NSCCL was a landmark in providing novation on all the spot equity market (and later, derivatives market) trades in India.

Part of the NSE Group (National Stock Exchange Group)

The National Securities Clearing Corporation Ltd. (NSCCL) is part of the NSE (National Stock Exchange) group and is a wholly-owned subsidiary of the NSE. It was incorporated in August 1995 and started clearing operations in April 1996. It was formed to build confidence in clearing and settlement of securities, to promote and maintain short and consistent settlement cycles, to provide a counter-party risk guarantee and to operate a tight risk containment system.

Clearing and Settlement

The NSCCL (National Securities Clearing Corporation Limited) carries out the clearing and settlement of the trades executed in the CM segment of NSE (National Stock Exchange) and operates constituent SGL for settlement trades in government securities.

Inter-region Clearing

The NSCCL (National Securities Clearing Corporation (Limited) facilitates inter-region clearing. It has Regional Clearing Centres at Delhi, Kolkata and Chennai and a Central Clearing Centre at Mumbai. Members have the option of delivering or receiving the securities at a clearing centre chosen by them.

Certificates Handled

To provide a level playing field to members irrespective of their location, the NSCCL (National Securities Clearing Corporation Limited) moves securities in the normal pay-in and pay-out on behalf of the Clearing Members from and to Regional Clearing Centres (RCC) and the Central Clearing Centre (CCC) at Mumbai.

Pre-delivery Verification

The NSCCL (National Securities Clearing Corporation Limited) was the first to start pre-delivery verification to detect bad papers such as fake and forged certificates or lost and stolen share certificates.

Dematerialised Settlement

The only effective solution to the problem of fake/forged and stolen shares was dematerialised trading and settlement. As SEBI made demat settlements mandatory in an ever-increasing number of securities in a phased manner, the proportion of shares delivered in the dematerialised form by the NSCCL (National Securities Clearing Corporation Limited) has increased.

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Risk Management

The NSCCL has also incorporated risk containment measures. A risk group constituted by the NSCCL (National Securities Clearing Corporation Limited) identified additional areas of perceived risk and intensified the monitoring of members' position having concentration in certain high-risk securities that attract high volumes and volatility.

Also a structured exercise of requiring unusually high pay-in liability members to make advance pay-in of funds has been put in place, in addition to offering facility of early pay-in of securities in demat mode.

Securities Lending/Borrowing

The automated lending and borrowing mechanism of the NSCCL (National Securities Clearing Corporation Limited) provides a facility to lend/borrow securities/funds at market-determined rates. This facilitates timely delivery of securities and thereby improves the efficiency of the system.

Professional Clearing Membership

The NSCCL (National Securities Clearing Corporation Limited) started the Professional Clearing Membership and the Stock Holding Clearing Corporation Ltd. has been admitted as the first professional clearing member on CM Segment.

Derivatives Settlement

The NSCCL (National Securities Clearing Corporation Limited) also provides clearing and settlement services including risk management for the derivatives market.

Multiple Depositories

The Central Depositories Securities Limited (CDSL) has been connected to the NSCCL (National Securities Clearing Corporation Limited) and clearing and settlement of securities in dematerialised form through the CDSL has also been introduced.

Did u know? The NSCCL (National Securities Clearing Corporation Limited) accepts FDRs drawn in its favour and maintains them in its custody. This has added value in services to the members as they are not any longer required to pay custodial charges but can be given instantaneous credit and benefit.

Task Visit www.nseindia.com and make a note on the minimum services that the clearing banks are required to provide to all clearing members of National Securities Clearing Corporation Ltd. as also to the Clearing Corporation

Self Assessment

Fill in the blanks:

14. NSCCL stands for .....
15. CDSL stands for .....

Notes

Case Study

Using Primary Market Research to Evaluate B2B Social Media Strategies

Recent research on social media has found that engaged consumers are more likely to buy and recommend a brand. Chadwick Martin Bailey, Inc. describes this research and their recent work with a leading processor company in re-evaluating their social media effectiveness.

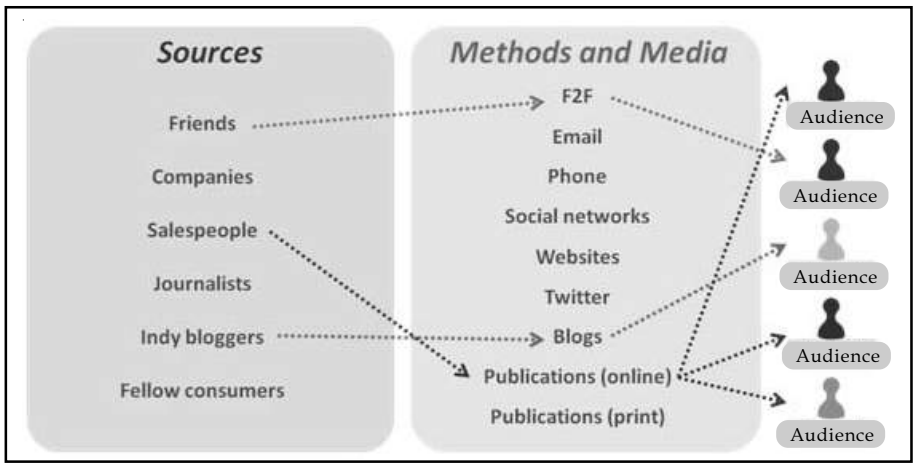
We recently conducted research on social media to look at why people become fans and followers of certain brands. We wanted to get a high level view of why people become a fan/follower. Our gut (and some of our own personal experience) told us that many people that become a fan or follower do so because they are already customers of that brand. For the most part our instinct was right. Our research found 49% of people who become Facebook fans do so because they are already a customer.

The really interesting part is we found over half of those people who are engaged stated that they are more likely to buy and recommend that brand since becoming a fan/follower. It's clear that using social media as an engagement strategy helps cut through the online clutter and keeps brands "top of mind".

This makes a lot of sense for consumer companies, but is a social media engagement strategy right for harder to reach B2B audiences? The short answer is yes, but not without digging deeper to learn more about whom you are trying to reach and where they "live" online. There are so many social media outlets available today and they are not all created equal and they're not a "one size fits all" answer.

Truly using social media as an engagement strategy may not take a lot of money, but it does take a lot of time. So the best place to start is prioritizing who you want to engage with and then look for the best places to find them and figure out how they want to be engaged in the various social media outlets available.

Recently we worked with AMD, a leading processor company to re-evaluate their social media effectiveness and develop a more optimized and targeted strategy to reach their widely disparate target audiences. It was important to start by looking at each of those targets and then systematically evaluate the true extent and impact of social media usage on each of those audiences.



Contd...

Notes

- ***Audience:*** We used separate research modules for each unique target audience, spanning from extreme B2B to consumer segments
- ***Recruiting:*** We did not use social media to recruit research participants as to prevent sampling bias
- ***Techniques:*** Both qualitative/open-ended and quantitative research

This approach allowed AMD to refine and optimize their social media content and tactics based on the different behaviours of each target audience.

Question

Highlight the briefing of the case.

Source: http://www.greenbook.org/marketing-research.cfm/evaluate-b2b-social-media-strategies

3.8 Summary

- Primary market of a country renders three major services: investigating and processing of proposals for new issues, underwriting of new security issues and distribution of new securities to ultimate investors. These functions are carried out by specialized agencies like financial institutions, brokers and dealers in securities.
- There are various methods of selling securities, viz., public issue through prospectus, offer for sale, private placement, right issue, over-the-counter-placement, stock option and book building.
- Stock exchange is the secondary market, which provides a place for regular sale and purchase of different types of securities like shares, debentures, bonds & government securities. It is an organised market where all transactions are regulated by the rules and laws of the concerned stock exchanges.
- The functions of a stock exchange are to provide ready and continuous market for securities, information about prices and sales, safety to dealings and investment, helps mobilisation of savings and capital formation. It acts as a barometer of economic and business conditions and helps in better allocation of funds.
- Stock exchanges provide many benefits to companies, investors and the society as a whole. But they also suffer from limitations like exclusive speculation and fluctuation in prices due to rumours and unpredictable events.
- Along with genuine investment, at times, stock exchange transactions may be undertaken by persons as a speculation.
- There are 23 stock exchanges in India presently, including BSE, NSE and OTCEI.
- Stock Exchanges are regulated by the Securities Contracts (Regulation) Act and by SEBI. SEBI has initiated a number of reforms in the primary and secondary market to regulate the stock market. Documentary and procedural requirements for listing and trading have been made stricter and foolproof to protect investors' interest.

3.9 Keywords

Book-building: A process by which a demand for the securities proposed to be issued by a body corporate is elicited and built-up and the price for such securities is assessed.

Brokers to an Issue: It represents intermediaries who are concerned with procuring the subscription to the issue from prospective investors across the country.

Notes

Green-shoe Option: An option of allocation of shares in excess of the shares included in the public issue and operating a post-listing price stabilizing mechanism through a Stabilizing Agent (SA).

Maintenance Margin: The required proportion of your equity to the total value of the stock. It protects the broker if the stock price declines.

Margin Call: If the percentage margin falls below the maintenance margin, the broker issues a margin call requiring the investor to add new cash or securities to the margin account.

Margin Trading: It occurs when investors who purchase stocks on margin borrow part of the purchase price of the stock from their brokers, and leave purchased stocks with the brokerage firm in street name because the securities are used as collateral for the loan.

Merchant Banker: Any person who is engaged in the business of issue management either by making arrangements regarding selling, buying or subscribing to securities or acting as manager, consultant, advisor or rendering corporate advisory service in relation to such 'issue management'.

Odd-lot Dealer: He/she specializes in buying and selling in amounts which are less than present trading units.

Percentage Margin: The ratio of the net worth, or "equity value" of the account to the market value of the securities.

Qualified Institutional Bidders: Under this method, bidders will be free to bid at any price above the floor price and allotment would be at differential prices against the current practice of bidding within a price band.

Secondary Market: A market for already existing long-term securities of governments, semi-governments and corporate enterprise.

Security Dealer: This dealer specializes in trading in government securities.

Short Sale: Investors can sell shares they do not own.

Stock Exchange: This is the term commonly used for a secondary market, which provide a place where different types of existing securities such as shares, debentures and bonds.

3.10 Review Questions

1. Outline major functions of the primary market in India.
2. Discuss, in brief, about the agencies associated with activities of primary market in India.
3. What are the various methods used in India for selling securities?
4. What is book-building?
5. Define stock exchange and explain its functions.
6. Explain the importance of stock exchanges from the points of view of companies and investors.
7. Explain the role played by SEBI in protecting investors' interests and controlling the business at stock exchange.
8. Discuss the role and objectives of NSCCL.
9. Write a brief note on the key members of the stock exchanges.
10. What do you mean by margin trading? Explain with the help of suitable examples.

Notes

11. "Every listing company has certain obligations and is required to comply with the various clauses of the listing agreement." Discuss.
12. How an efficient secondary market does make access to international capital easier?
13. Write a short note on rolling settlement.
14. As per the listing agreement what are the threshold limits for listing of new companies?

Answers: Self Assessment

1.	Primary	2.	Market
3.	False	4.	True
5.	Registrar, transfer agent	6.	Long-term
7.	True	8.	False
9.	Buoyancy	10.	Stock exchanges
11.	True	12.	False
13.	True		

14. National Securities Clearing Corporation Limited
15. The Central Depositories Securities Limited

3.11 Further Readings

Books

G.M. Meier and R.E. Baldwin, *Economic Development, Theory, History, Policy,* John Wiley & Sons, INC, New York, 1957, p.2.

George Rosen, *Industrial Change in India*, Asia Publishing House, Bombay, 1959, p.1.

Ragnar Nurkse, *Problems of Capital Formation in Underdeveloped Countries,* Basil Blackwell, Oxford, 1955,

W. Arthur Lewis, *The Theory of Economic Growth,* George Allen & Unwin Ltd., London, 1956, p11.

Online links

www.bis.org

www.federalreserve.gov

www.thebanker.com

Notes

Unit 4: Risk and Return

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Objectives

After studying this unit, you will be able to:

- Explain the different types of investment risks
- Discuss the measurement of risks
- Elaborate the risk and expected return
- Discuss the return and risk of portfolio

Introduction

Every business planning involves risk, and an individual need to take risk according to his/her risk appetite, so as to earn sufficient return on the amount being invested. Risk can be clearly

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understood as the probability that the expected return from the security will not materialise. Every investment includes uncertainties that make future investment returns risk-prone. Uncertainties could be owing to the political, economic and industry factors.

Risk could be systematic in future depending on its source. Systematic risk is for the market as a whole, whereas unsystematic risk is particular to an industry or the company alone. The first three risk factors discussed below are systematic in nature and the rest are unsystematic. Political risk could be categorised depending upon whether it affects the market as whole, or only a particular industry. Hence, in this unit we will study about the various types of risk involved in investment and the risk and return relationship.

4.1 Types of Investment Risk

The various types of investment risk are discussed as follows:

4.1.1 Systematic versus Non-systematic Risk

Modern investment analysis categorises the traditional sources of risk causing variability in returns into two broad types; those that are pervasive in nature, such as market risk or interest rate risk, and those that are specific to a particular security issue, such as business or financial risk. Thus, we must take into account these two categories of total risk. Dividing total risk into its two components, a general (market) component and a specific (issuer) component, we have systematic risk and non-systematic risk, which are additive:

$$\begin{aligned} \text{Total risk} &= \text{General risk} + \text{Specific risk} \\ &= \text{Market risk} + \text{Issuer risk} \\ &= \text{Systematic risk} + \text{Non-systematic risk} \end{aligned}$$

Systematic Risk

An investor can make a diversified portfolio and do away with the part of the total risk, the diversifiable or non-market part. What is left is the non-diversifiable portion or the market risk. Variability in a security's total returns that is directly related with overall movements in the general market or economy is called systematic (market) risk. Almost all securities have some systematic risk, whether bonds or stocks, as systematic risk directly cover interest rate, market, and inflation risks.

Non-systematic Risk

The variability in a security's total returns not associated to overall market variability is called the non-systematic (non-market) risk. This risk is exclusive to a specific security and is linked with such factors as business and financial risk as well as liquidity risk. Though all securities tend to have some non-systematic risk, it is normally connected with common stocks.

Different types of systematic and unsystematic risks are explained as follows:

1. ***Market Risk:*** The unpredictability in a security's returns resulting from fluctuations in the aggregate market is known as market risk. All securities are exposed to market risk including recessions, wars, structural changes in the economy, tax law changes as well as changes in consumer choice. Market risk is at times used synonymously with systematic risk.
2. ***Interest Rate Risk:*** The variability in a security's return consequential from variations in the level of interest rates is referred to as interest rate risk. Such changes in general affect

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securities in an inverse or contrary manner; that is, other things being equal, security prices move inversely to interest rates. The rationale for this movement is tied up with the valuation of securities. Interest rate risk has an effect on bonds more directly than common stocks and is a major risk that all bondholders face. As interest rates change, bond prices change in the reverse direction.

3. ***Purchasing Power Risk:*** A factor affecting all securities is purchasing power risk, also known as inflation risk. This is the possibility that the purchasing power of invested dollars will deteriorate. With uncertain inflation, the real (inflation-adjusted) return involves risk even if the nominal return is safe (for example, a Treasury bond). This risk is connected with interest rate risk, as interest rates in general rise as inflation increases, because lenders demand additional inflation premiums to compensate for the loss of purchasing power.

4. ***Regulation Risk:*** Some investments can be comparatively attractive to other investments on account of certain regulations or tax laws that give them a benefit of some kind. Municipal bonds, for example, pay interest that is excused from taxation on local, state and federal levels. As a consequence of that special tax exemption, municipals can price bonds to yield a lower interest rate since the net after-tax yield may still make them attractive to investors. The risk of a regulatory change that could adversely affect the stature of an investment is a real danger. Prices for many limited partnerships tumbled when investors were left with different securities, in effect, than what they originally bargained for. To make matters worse, there was no extensive secondary market for these illiquid securities and many investors found themselves unable to sell those securities at anything but 'fire sale' prices if at all.

Did u know? In 1987, tax law changes dramatically lessened the attractiveness of many existing limited partnerships that relied upon special tax considerations as part of their total return.

5. ***Business Risk:*** The risk of doing business in a specific industry or environment is called business risk. For example, as one of the largest steel producers, U.S. Steel faces unique problems. Likewise, General Motors faces unique problems as a result of such developments as the global oil situation and Japanese imports.

6. ***Bull-Bear Market Risk:*** This risk grows from the variability in the market returns resulting from alternating bull and bear market forces. When security index rises fairly consistently from a low point, called a trough, over a period of time, this upward course is called a bull market. The bull market ends when the market index attains a peak and starts a downward trend. The period during which the market declines to the next trough is called a bear market.

7. ***Management Risk:*** Management, all said and done, is comprised of people who are mortal, fallible and capable of making a mistake or a poor decision. Errors made by the management can harm those who invested in their firms. Forecasting errors is difficult work and may not be worth the effort and, as a consequence, imparts a needlessly sceptical outlook.

8. ***Default Risk:*** It is that part of an investment's total risk that results from changes in the financial integrity of the investment. For instance, when a company that issues securities moves either further away from bankruptcy or closer to it, these changes in the firm's financial integrity will be reflected in the market price of its securities. The variability of return that investors experience, as a consequence of changes in the credit worthiness of a firm in which they invested, is their default risk.

Notes

Nearly all the losses suffered by investors as a result of default risk are not the result of actual defaults and/or bankruptcies. Investor losses from default risk generally result from security prices falling as the financial integrity of a corporation's weakness – market prices of the troubled firm's securities will already have dropped to near zero.

4.1.2 International Risk

All investors who invest internationally in today's increasingly global investment arena face the prospect of uncertainty, let us discuss more:

1. ***Exchange Rate Risk:*** The returns after investors convert the foreign gains back to their own currency, there is risk. Unlike the past, when most US investors ignored international investing alternatives, investors today must recognise and understand exchange rate risk, which can be defined as the variability in returns on securities caused by currency fluctuations.
2. ***Country Risk:*** Country risk, also referred to as political risk, is a significant risk for investors today. With more investors investing internationally, both directly and indirectly, the political and thus economic stability and viability of a country's economy need to be considered. The United States has the lowest country risk, and other countries can be estimated on a relative basis using the United States as a benchmark. Examples of countries that needed careful monitoring in the 1990s because of country risk included the former Soviet Union and Yugoslavia, China, Hong Kong, and South Africa.
3. ***Liquidity Risk:*** Liquidity risk is the risk linked with the particular secondary market in which a security trades. An investment that can be bought or sold fast and without considerable price concession is considered liquid. The more uncertainty about the time element and the price concession, the greater the liquidity risks. A Treasury bill has little or no liquidity risk, whereas a small OTC stock may have substantial liquidity risk.
4. ***Liquid Assets Risk:*** It is that part of an asset's total variability of return which results from price discounts given or sales concessions paid in order to sell the asset without delay. Perfectly liquid assets are very well marketable and experience no liquidation costs. Illiquid assets are not readily marketable and suffer no liquidation costs. Either price discounts must be given or sales commissions must be paid, or the seller must incur both the costs, in order to find a new investor for an illiquid asset. The more illiquid the asset is, the larger the price discounts or the commissions that must be paid to dispose of the assets.
5. ***Political Risk:*** It evolves from the exploitation of a politically weak group for the benefit of a politically strong group, with the hard work of several groups to improve their relative positions increasing the variability of return from the affected assets. Regardless of whether the changes that cause political risk are sought by political or by economic interests, the resulting variability of return is called political risk, if it is accomplished through legislative, judicial or administrative branches of the government.
6. ***Industry Risk:*** An industry may be considered as group of companies that compete with each other to market a homogeneous product. Industry risk is that portion of an investment's total variability of return caused by events that affect the products and firms that make up an industry. For example, commodity prices going up or down will affect all the commodity producers, though not equally.

Did u know? Exchange rate risk is sometimes called currency risk.

Notes

These risk factors do not make up an exhaustive list, but are only representative of the most important classifications involved. All the doubts taken together make up the total risk, or the total variability of return.

Self Assessment

Fill in the blanks:

1. Risk could be ..... in future depending on its source.
2. ..... risk is particular to an industry or the company alone.

Caselet

Risk-return Tradeoffs in a Mixed Farming System in Highland Ethiopia

The role of livestock enterprises as a risk management option for subsistence smallholder farmers in an Ethiopian highland site (Debre Berhan) is examined. Specifically, the paper addresses the issue of whether livestock enterprises can be an income stabilizing agent in a traditional mixed crop and livestock farming system representative of important parts of the Ethiopian highlands.

The analysis is based on the application of a stochastic farm-firm linear programming model. Farm income is the stochastic variable of the model. Technological and resource constraint sets which approximate those of representative smallholders in the Debre Berhan area are incorporated into the empirical framework. The data inputs to the model have been collected in field surveys conducted by ILCA (International Livestock Centre for Africa) covering the period 1979–1983. Linear programming solutions are obtained for three situations:

1. A set of solutions where traditional farm technologies apply.
2. A set of solutions where farmers can use one ox, rather than the traditional pair, for cultivation.
3. A set of solutions where farmers can keep a relatively high-yielding crossbred cow for milk production to raise cash incomes.

The main empirical results are:

1. In the traditional farming system, increasing sheep flock sizes reduces income variation.
2. The single ox-traction technology offsets income variation by increasing mean income as a result of its higher efficiency as compared to the oxen-pair traction technology.
3. The adoption of the crossbred technology results in a lower income coefficient of variation. This is mainly due to its high mean income. However, due to the labour-intensive nature of the crossbred cow enterprise, labour becomes expensive. As a result, a tendency for crop specialization arises.

Source: http://www.sciencedirect.com/science/article/pii/0308521X88900558

Notes

4.2 Measurement of Risk

There are several ways of risk measurement, described as follows:

4.2.1 Volatility

Of all the ways to explain risk, the simplest and possibly most accurate is "the uncertainty of a future outcome." The probable return for some future period is known as the expected return. The actual return over some past period is known as the realised return. The simple fact that dominates investing is that the realised return on an asset with any risk attached to it may be different from what was expected. Volatility may be portrayed as the range of movement (or price fluctuation) from the expected level of return. For example, the more a stock goes up and down in price, the more volatile that stock is. Since wide price swings create more uncertainty of an eventual outcome, increased volatility can be equated with increased risk. Being able to measure and determine the past volatility of a security is significant in that it provides some insight into the riskiness of that security as an investment.

4.2.2 Standard Deviation

Investors and analysts should be at least to some extent familiar with the study of probability distributions. Since the return an investor will earn from investing is not known, it must be estimated. An investor may expect the TR (total return) on a particular security to be ten percent for the coming year, but in truth this is only a "point estimate."

4.2.3 Probability Distributions

To handle with the uncertainty of returns, investors need to think clearly about a security's distribution of probable TRs. In other words, investors need to keep in mind that, though they may expect a security to return 10%, for example, this is only a one-point estimate of the entire range of possibilities. Given that investors must deal with the uncertain future, a number of possible returns can, and will, occur.

Probabilities symbolise the likelihood of a variety of outcomes and are normally expressed as a decimal (sometimes fractions are used). The sum of the probabilities of all possible outcomes must be 1.0, as they must completely describe all the (perceived) likely occurrences. How are these probabilities and associated outcomes obtained? In the final analysis, investing for some future period involves uncertainty, and therefore subjective estimates. Though past occurrences (frequencies) may be relied on heavily to guess the probabilities, the past must be modified for any changes expected in the future. With a distinct probability distribution, a probability is assigned to each possible outcome. With a continuous probability distribution, an infinite number of possible outcomes exist. The most well-known continuous distribution is the normal distribution depicted by the well-known bell-shaped curve often used in statistics. It is a two-parameter distribution in that the mean and the variance fully describe it.

To explain the single-most probable outcome from a specific probability distribution, it is necessary to calculate its expected value. The expected value is the average of all possible return outcomes, where each outcome is weighted by its respective probability of occurrence. For investors, this can be explained as the expected return.

To calculate the total risk associated with the expected return, the variance or standard deviation is used. This is a computation of the spread or dispersion in the probability distribution; that is, a measurement of the dispersion of a random variable around its mean.

Notes

Notes Probability distributions can be either discrete or continuous.

Computing a standard deviation using probability distributions involves making subjective estimates of the probabilities and the likely returns. Though, we cannot avoid such estimates as future returns are uncertain. The prices of securities are based on investors' expectations about the future. The relevant standard deviation in this situation is the ex ante standard deviation and not the ex post based on realised returns.

One significant point about the estimation of standard deviation is the differentiation between individual securities and portfolios. Standard deviations for well-diversified portfolios are reasonably steady across time, and thus historical calculations may be fairly reliable in projecting the future. Moving from well- diversified portfolios to individual securities, though, makes historical calculations much less reliable. Luckily, the number one rule of portfolio management is to diversify and hold a portfolio of securities, and the standard deviations of well-diversified portfolios may be more stable.

Something very crucial to remember about standard deviation is that it is a measure of the total risk of an asset or a portfolio, including, therefore, both systematic and unsystematic risk. It captures the total variability in the asset or portfolio return whatever the sources of that variability. In a brief statement, the standard deviation of return measures the total risk of one security or the total risk of a portfolio of securities. The historical standard deviation can be calculated for individual securities or portfolios of securities using total returns for some particular period of time. This ex post value is useful in evaluating the total risk for a specific historical period and in estimation the total risk that is expected to prevail over some future period.

The standard deviation, combined with the normal distribution, can provide some useful information about the dispersion or variation in returns. In a normal distribution, the probability that a specific outcome will be above (or below) a specified value can be determined. With one standard deviation on either side of the arithmetic mean of the distribution, 68.3% of the outcomes will be covered; that is, there is a 68.3% probability that the actual outcome will be within one (plus or minus) standard deviation of the arithmetic mean. The probabilities are 95% and 99% that the actual outcome will be within two or three standard deviations, respectively, of the arithmetic mean.

4.2.4 Beta

Beta is a measure of the systematic risk of a security that cannot be avoided through diversification. If the security's returns move more (less) than the market's returns as the latter changes, the security's returns have more (less) volatility (fluctuations in price) than those of the market. It is significant to note that beta measures a security's volatility, or fluctuations in price, relative to a benchmark, the market portfolio of all stocks.

Securities with different slopes have different sensitivities to the returns of the market index. If the slope of this relationship for a specific security is a 45-degree angle, the beta is 1.0. This means that for every 1% change in the market's return, on average this security's returns change 1%. The market portfolio has a beta of 1.0. A security with a beta of 1.5 shows that on an average security returns are 1.5 times as volatile as market returns, both up and down. This would be considered an aggressive security since, when the overall market return rises or falls 10%, this security, on average, would rise or fall 15%. Stocks having a beta of less than 1.0 would be regarded more conservative investments than the overall market.

Notes

Notes It is significant to note that beta measures a security's volatility, or fluctuations in price, in relation to a benchmark, the market portfolio of all stocks.

Beta is useful for evaluating the relative systematic risk of different stocks and, in practice, is used by investors to judge a stock's riskiness. Stocks can be ranked by their betas. As the variance of the market is constant across all securities for a specific period, ranking stocks by beta is the same as ranking them by their absolute systematic risk. Stocks with high betas are said to be high-risk securities.

Caution Beta is a comparative measure of the risk of an individual stock relative to the market portfolio of all stocks.

Self Assessment

State whether the following statements are true or false:

3. Investors and analysts should be at least to some extent familiar with the study of probability distributions.
4. Beta is useful for evaluating the relative unsystematic risk of different stocks.

4.3 Risk and Expected Return

Risk and expected return are the two major determinants of an investment decision. Risk, in easy terms, is linked with the variability of the rates of return from an investment; how much do individual outcomes deviate from the expected value? Statistically, risk is measured by any one of the measures of dispersion such as co-efficient of range, variance, standard deviation etc.

The risk involved in investment depends on various factors such as:

1. The length of the maturity period, longer maturity periods impart greater risk to investments.
2. The credit-worthiness of the issuer of securities, the ability of the borrower to make periodical interest payments and pay back the principal amount will impart safety to the investment and this lessens risk.
3. The nature of the instrument or security also ascertains the risk. Generally, government securities and fixed deposits with banks tend to be risk less or least risky; corporate debt instruments like debentures be inclined to be riskier than government bonds and ownership instruments like equity shares tend to be the riskiest. The comparative ranking of instruments by risk is once again connected to the safety of the investment.
4. Equity shares are believed to be the most risky investment on account of the variability of the rates of returns and also for the reason that the residual risk of bankruptcy has to be borne by the equity holders.
5. The liquidity of an investment also decides the risk involved in that investment. Liquidity of an asset refers to its quick saleability without a loss or with a minimum of loss.
6. In addition to the aforementioned factors, there are also several others such as the economic, industry and firm specific factors that affect the risk an investment. A thorough analysis of these risk factors will be taken up in the next unit.

Another foremost factor determining the investment decision is the rate of return expected by the investor. The rate of return expected by the investor comprises of the yield and capital appreciation.

Notes

4.3.1 Determinants of the Rate of Return

Three major determinants of the rate of return anticipated by the investor are:

1. The time preference risk-free real rate
2. The expected rate of inflation
3. The risk associated with the investment, which is unique to the investment.

Hence, Required return = Risk-free real rate + Inflation premium + Risk premium

It was said earlier that the rate of return from an investment comprises of the yield and capital appreciation, if any. The difference between the sale price and the purchase price is the capital appreciation and the interest or dividend divided by the purchase price is the yield. Accordingly

$$\text{Rate of return } (R_t) = \frac{I_t + [P_t - P_{t-1}]}{P_{t-1}} \quad ...(1)$$

Where R_t = Rate of return per time period 't'

I_t = Income for the period 't'

P_t = Price at the end of time period 't'

P_{t-1} = Initial price, that is, price at the beginning of the period 't'.

In the above equation 't' can be a day or a week or a month or a year or years and accordingly daily, weekly, monthly or annual rates of return could be computed for most capital assets.

The above equation can be split into two components. Viz.,

$$\text{Rate of return } (R_t) = \frac{I_t}{P_{t-1}} + \frac{P_t - P_{t-1}}{P_{t-1}} \quad ...(2)$$

Where $\frac{I_t}{P_{t-1}}$ is called the current yield,

and $\frac{P_t - P_{t-1}}{P_{t-1}}$ is called the capital gain yield.

Or ROR = current yield +capital gain yield

Example: The following information is given for a corporate bond. Price of the bond at the beginning of the year: ₹ 90, Price of the bond at the end of the year: ₹ 95.40, Interest received for the year: ₹ 13.50. Calculate the rate of return.

Solution:

The rate of return can be computed as follows:

$$\frac{13.50 + (95.40 - 90)}{90} = 0.21 \text{ or } 21\% \text{ per annum}$$

The return of 21% consists of 15% current yield and 6% capital gain yield.

There is invariably a direct association between the rates of return and the asset prices. Finance theory specifies that the price of any asset is equal to the sum of the discounted cash flows, which

Notes

the capital asset owner would receive. Consequently, the current price of any capital asset can be expected, symbolically, as

$$P_0 = \sum_{t=1}^{n} \frac{E(I_t)}{(1+r)^t} + \frac{P_n}{(1+r)^n} \quad ...(3)$$

Where $E(I_t)$ = Expected income to be received in year 't'

P_0 = Current price of the capital asset

P_n = Price of the asset on redemption or on liquidation

R = the rate of return investors expect given the risk inherent in that capital asset.

Thus, 'r' is the rate or return, which the investors need in order to invest in a capital asset that is used to mark down the expected future cash flows from that capital asset.

Self Assessment

Fill in the blanks:

5. ..... and expected returns are the two major determinants of an investment decision.
6. There is invariably a ..... association between the rates of return and the asset prices.

4.4 Risk-return Relationship

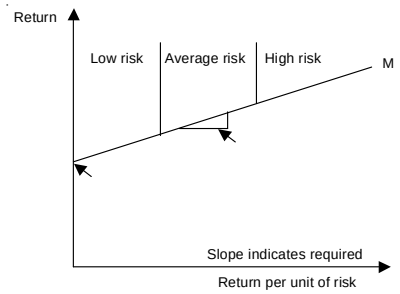
The most fundamental principle of finance literature is that there is a trade-off between risk and return. The risk-return relationship needs that the return on a security should be proportionate with its riskiness. If the capital markets are operationally efficient, then all investment assets should provide a rate or return that is consistent with the risks linked with them. The risk and return are directly variable, that is, an investment with higher risk should produce higher return.

The risk/return trade-off could easily be called the "ability-to-sleep-at-night test." As some people can deal with the equivalent of financial skydiving without batting an eye, others are frightened to climb the financial ladder without a secure harness. Deciding what amount of risk you can take when remaining comfortable with your investments is very significant.

In the investing world, the dictionary definition of risk is the possibility that an investment's actual return will be different than expected. Technically, this is calculated in statistics by standard deviation. Risk means you have the possibility of losing some, or even all, of your original investment.

Low levels of uncertainty (low risk) are related with low potential returns. High levels of uncertainty (high risk) are associated with high potential returns. The risk/return trade-off is the balance between the wish for the lowest possible risk and the highest possible return. A higher standard deviation means a higher risk and higher possible return. The figure below corresponds to the relationship between risk and return.

Figure 4.1: Risk and Return Relationship

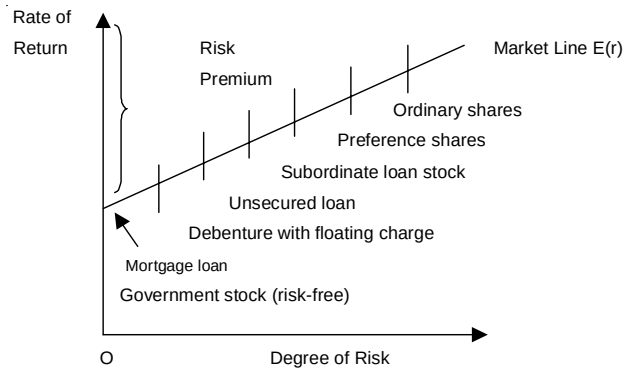


Notes

The slope of the Market Line points to the return per unit of risk required by all investors. Highly risk-averse investors would have a steeper line, and the other way around. Yields on apparently alike stocks may differ. Differences in price, and thus yield, reflect the market's assessment of the issuing company's standing and of the risk elements in the specific stocks. A high yield in relation to the market in general demonstrates an above average risk element.

This is shown in the figure below.

Figure 4.2: Risk Return Relationship of Different Stocks



Given the composite market line existing at a point of time, investors would select investments that are reliable with their risk preferences. Some will consider low-risk investments, whereas others prefer high-risk investments.

The risk/return trade-off tells us that the higher risk gives us the possibility of higher returns. But there are no guarantees or assurance. Just as risk means higher potential returns, it also means higher potential losses.

Notes A common misconception is that higher risk equals greater return.

On the lower end of the scale, the risk-free rate of return is represented by the return on Treasury Bills of government securities, for the reason that their chance of default is next to nil. If the risk-free rate is at present 8 to 10 %, this means, with nearly no risk, we can earn 8 to 10 % per year on our money.

The common question arises; who wants to earn 6% when index funds average 12% per year over the long run? The answer to this is that even the full market (represented by the index fund) carries risk. The return on index funds is not 12% every year, but rather -5% one year, 25% the next year, and so on. An investor still faces considerably greater risk and volatility to receive an overall return that is higher than a predictable government security. We call this additional return the risk premium, which in this case is 8% (12%–8%).

Deciding what risk level is most proper for you isn't an easy question to answer. Risk tolerance differs from person to person. Your decision will depend on your goals, income and personal situation, among other factors.

Self Assessment

State whether the following statements are true or false:

7. A common misconception is that higher risk equals smaller return.

Notes

8. The risk/return trade-off tells us that the higher risk gives us the possibility of higher returns.

4.5 Portfolio and Security Returns

A portfolio is a collection of securities. As it is rarely desirable to invest the total funds of an individual or an institution in a single security, it is necessary that every security be looked at in a portfolio context. Therefore, it seems reasonable that the expected return of a portfolio should depend on the expected return of each of the security contained in the portfolio. It also seems logical that the amounts invested in each security should be important. Indeed, this is the case. The example of a portfolio with three securities shown in tables 4.1 to 4.3 illustrates this point.

The expected holding period value – relative for the portfolio is clearly shown:

$$\frac{₹\ 23,100}{₹\ 20,000} = 1.155$$

Giving an expected holding period return of 15.50%.

Table 4.1: Security and Portfolio Values

Security	No. of Shares (₹)	Current Price Per Share (₹)	Current Value (₹)	Expected End-of-Period Share Value (₹)	Expected End-of-Period Share Value (₹)
1	2	3	4	5	6
XYZ	100	15.00	1,500	18.00	1,800
ABC	150	20.00	3,000	22.00	3,300
RST	200	40.00	8,000	45.00	9,000
KNF	250	25.00	6,250	30.00	7,500
DET	100	12.50	1,250	15.00	1,500
			20.000		23.100

Table 4.2: Security and Portfolio Value-Relative

Security	Current Value	Proportion of Current Value of Properties	Current Price Per Share	Expected End-of-Period Value Per Share	Expected Holding-Period Value-Relative	Contribution to Portfolio Expected Holding-Period Value-Relative
(1)	(2) (₹)	(3) = (2)/20000	(4) (₹)	(5) (₹)	(6) = (5) / (4)	(7) = (3) × (6)
XYZ	1,500	.0750	15.00	18.00	1.200	0.090000
ABC	3,000	.1500	20.00	22.00	1.100	0.165000
RST	8,000	.4000	40.00	45.00	1.125	0.450000
KNF	6,250	.3125	25.00	30.00	1.200	0.375000
DET	1,250	.0625	12.50	15.00	1.200	0.075000
	20,000	1.0000				1.155000

Notes

Table 4.3: Security and Portfolio Holding-period Returns

Security	Proportion of Current Value of Portfolio	Expected Holding Period Return (%)	Contribution to Portfolio Expected Holding Period Return (%)
1	2	3	4
XYZ	.0750	20.00	1.50
ABC	.1500	10.00	1.50
RST	.4000	12.50	5.00
KNF	.3125	20.00	6.25
DET	.0625	20.00	1.25
	1.0000		15.50

As the portfolio's expected return is a weighted average of the expected returns of its securities, the input of each security to the portfolio's expected returns depends upon its expected returns and its proportionate share of the initial portfolio's market value. Nothing else is relevant. It follows that an investor who purely wants the greatest possible expected return should hold one security. This should be the one that is considered to have the greatest expected return. Only a few investors do this, and very few investment advisers would counsel such an extreme policy. Instead, investors should diversify, meaning that their portfolio should include more than one security. This is because diversification can reduce risk.

Self Assessment

Fill in the blanks:

9. A portfolio is a collection of .....

10. The portfolio's ..... returns depend upon its proportionate share of the initial portfolio's market value.

4.6 Risk

All probable questions which the investor may ask, the most significant ones are concerned with the probability of actual yield being less than zero, that is, with the probability of loss. This is the essence of risk. A useful amount of risk has to somehow take into account both the probability of a variety of possible "bad" outcomes and their associated magnitudes. Instead of measuring the probability of a number of different possible outcomes, the measure of risk should somehow estimate the degree to which the actual outcome is expected to diverge from the expected.

Two measures are used for this purpose, the average (or mean) absolute deviation and the standard deviation.

Example: The rate of return of equity shares of Wipro Ltd., for past six years are given below:

Rate of Return of Equity Shares of Wipro Ltd

Year	01	02	03	04	05	06
Rate of return (%)	12	18	-6	20	22	24

Notes

Calculate the average rate of return, standard deviation and variance.

Solution:

Calculation of Average rate of Return

$$\bar{R} = \frac{\Sigma R}{N} = \frac{12+18-6+20+22+24}{6} = 15\%$$

$$\sigma^2 = \frac{\Sigma(R-\bar{R})^2}{N}$$

Years and Respective Rate of Return

Year	Rate of Return (%)	$(R-\bar{R})$	$(R-\bar{R})^2$
2001	12	-3	9
2002	18	3	9
2003	-6	-21	441
2004	20	5	25
2005	22	7	43
2006	24	9	81
		$\Sigma(R-\bar{R})^2$	614

$$\text{Variance } (\sigma^2) = \frac{614}{6} = 102.33$$

$$= \sqrt{\sigma^2} = \sqrt{\text{Variance}} = \sqrt{102.33}$$

$$= 10.12\%$$

Example: Mr. RKV invested in equity shares of Wipro Ltd., its anticipated returns and associated probabilities are given below:

Anticipated Returns and Associated Probabilities in Equity Shares of Wipro Ltd.

Return %	-15	-10	5	10	15	20	30
Probability	0.05	0.10	0.15	0.25	0.30	0.10	0.05

You are required to calculate the expected rate of return and risk in terms of standard deviation.

Solution:

Calculation of expected return and risk in terms of standard deviation.

Expected Return and Risk

Return (R)	Probability (P)	$(P \times R)$	$(R-\bar{R})$	$(R-\bar{R})^2$	$(R-\bar{R})^2 \times P$
-15	0.05	- 0.75	-5.5	30.25	1.5125
-10	0.10	-1.0	-0.5	0.25	0.0250

Contd...

Notes

5	0.15	0.75	-4.5	20.25	3.0375
10	0.25	2.50	0.5	0.25	0.625
15	0.30	4.50	5.5	30.25	9.0750
20	0.10	2.00	10.5	110.25	11.0250
30	0.05	1.50	20.5	420.25	21.0125
	1.00	$\overline{R}$ =9.5%			$\Sigma(R-\overline{R})^2 P$ = 45.75

Expected Return $\overline{R} = \Sigma(PXR) = 9.5\%$

Standard Deviation = $\Sigma(R-\overline{R})^2 P = \sqrt{45.75} = 6.764$

The risk in the above example can be measured by taking the range of 45% (that is 30%- (-) 15%) and standard deviation of 6.764. The investment carries greater risk in terms of high variation in return.

Self Assessment

State whether the following statements are true or false:

11. A useful amount of risk has to somehow take into account both the probability of a variety of possible "bad" outcomes and their associated magnitudes.
12. All probable questions which the investor may ask, the most significant ones are unconcerned with the probability of actual yield being less than zero.

4.7 Return and Risk of Portfolio

This section of the unit will focus on return and risk associated with the portfolio.

4.7.1 Return of Portfolio (Two Assets)

The likely return from a portfolio of two or more securities is equal to the weighted average of the expected returns from the individual securities.

$$\Sigma(R_P) = W_A(R_A) + W_B(R_B)$$

Where,

$\Sigma(R_P)$ = Expected return from a portfolio of two securities

W_A = Proportion of funds invested in Security A

W_B = Proportion of funds invested in Security B

R_A = Expected return of Security A

R_B = Expected return of Security B

$W_A + W_B = 1$

Example: A Ltd.'s share gives a return of 20% and B Ltd.'s share gives 32% return. Mr. Gotha invested 25% in A Ltd.'s shares and 75% of B Ltd.'s shares. What would be the expected return of the portfolio?

Notes

Solution:

Portfolio Return = 0.25(20) + 0.75 (32) = 29%

4.7.2 Risk of Portfolio (Two Assets)

The risk of a security is calculated in terms of variance or standard deviation of its returns. The portfolio risk is not plainly a measure of its weighted average risk. The securities that a portfolio includes are linked with each other. The portfolio risk also takes into account the covariance between the returns of the investment. Covariance of two securities is a measure of their co-movement; it expresses the degree to which the securities differ together. The standard deviation of a two-share portfolio is calculated by applying formula given below:

$$p = W_A^2\sigma_A^2 + W_B^2 + 2W_AW_B\rho_{AB}\sigma_A\sigma_B$$

Where,

σ_p = Standard deviation of portfolio consisting securities A and B

$W_A W_B$ = Proportion of funds invested in Security A and Security B

$\sigma_A\sigma_B$ = Standard deviation of returns of Security A and Security B

ρ_{AB} = Correlation coefficient between returns of Security A and Security B

The correlation coefficient (AB) can be calculated as follows:

$$AB = \frac{Cov_{AB}}{\sigma_A\sigma_B}$$

The covariance of Security A and Security B can be presented as follows:

$$Cov_{AB} = \sigma_A\sigma_B\rho_{AB}$$

The diversification of unsystematic risk, using a two-security portfolio, depends on the correlation that exists between the returns of those two securities. The quantification of correlation is done through calculation of correlation coefficient of two securities (). The value of correlation ranges between –1 to 1; it can be interpreted as follows:

If = ρ_{AB} = 1, No unsystematic risk can be diversified.

If = ρ_{AB} = – 1, All unsystematic risks can be diversified.

If = ρ_{AB} = 0, No correlation exists between the returns of Security A and Security T

Self Assessment

Fill in the blanks:

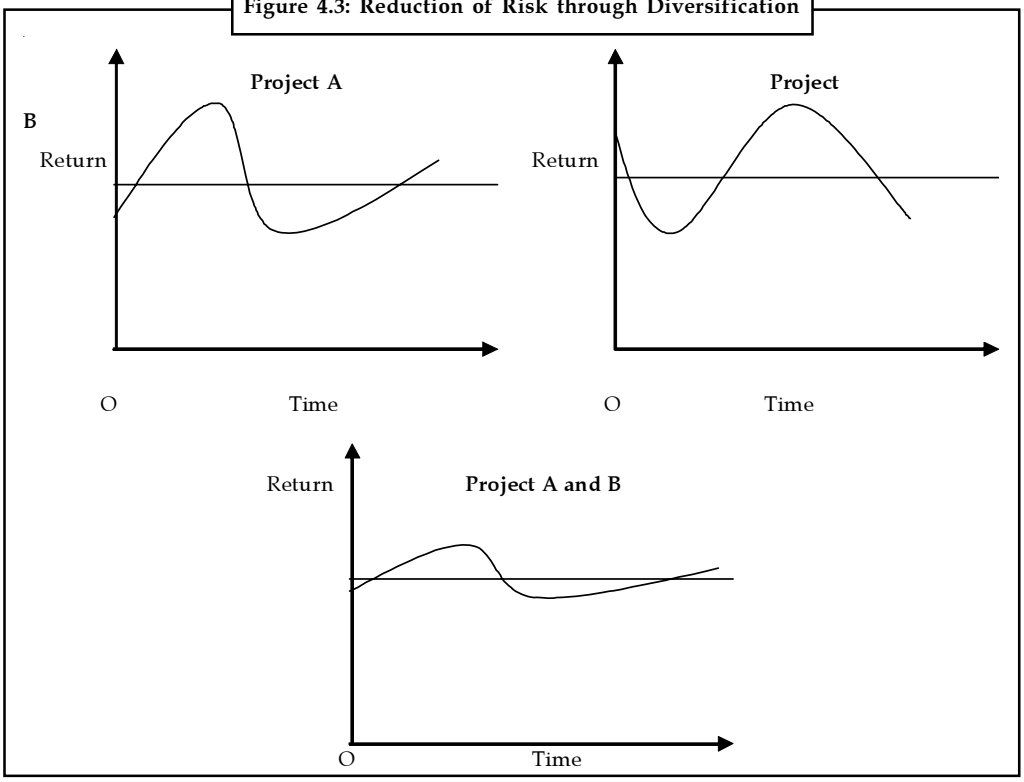
13. The likely return from a portfolio of two or more securities is equal to the weighted ..... of the expected returns from the individual securities.
14. The diversification of unsystematic risk, using a two-security portfolio, depends on the ..... that exists between the returns of those two securities.

Notes

4.8 Portfolio Diversification and Risk

In an efficient capital market, the significant principle to consider is that, investors should not hold all their eggs in one basket; investor should hold a well-diversified portfolio. In order to comprehend the nature or meaning of portfolio diversification, one must understand correlation. Correlation is a statistical measure that shows the relationship, if any, between series of numbers representing anything from cash flows to test data. If the two series move together, they are positively correlated; if the series move in opposite directions, they are negatively correlated. The existence of perfectly correlated particularly negatively correlated-projects is quite uncommon. In order to diversify project risk and thus reduce the firm's overall risk, the projects that are best combined or added to the existing portfolio of projects are those that have a negative (or low positive) correlation with active projects. By combining negatively correlated projects, the total variability of returns or risk can be reduced. The figure demonstrates the result of diversifying to reduce risk.

Figure 4.3: Reduction of Risk through Diversification



It shows that a portfolio is containing the negatively corrected projects A and B, both having the same expected return, E, but less risk (that is, less variability of return) than either of the projects taken alone. This type of risk is at times described as diversifiable or alpha risk. The creation of a portfolio by combining two absolutely correlated projects cannot lessen the portfolio's overall risk below the risk of the least risky project, whilst the creation of a portfolio combining two projects that are perfectly negatively correlated can decrease the portfolio's total risk to a level below that of either of the component projects, which in some particular situations may be zero.

Task Pen down your views on Portfolio and Security Returns.

Notes

4.8.1 Benefits of Diversification

The gains in risk reduction from portfolio diversification depend reciprocally upon the extent to which the returns on securities in a portfolio are positively correlated. In an ideal manner, the securities should exhibit negative correlation. This means that if a pair of securities has a negative correlation of returns, then in circumstances where one of the securities is performing badly, the other is likely to be doing well and vice versa in inverse circumstances. Thus, the average return on holding the two securities is expected to be much 'safer' than investing in one of them alone.

Utility Function and Risk Taking

Common investors will have three possible attitudes to undertake risky course of action (i) an aversion to risk (ii) a desire to take risk, and (iii) an indifference to risk.

The following example will clarify the risk attitude of the individual investors.

Example: The possible outcomes of two alternatives A and B are depicted in the table below:

The Possible Outcomes of Two Alternatives A and B, Depending on the State of Economy

State of economy	Possible outcome (₹)	
	A	B
Normal	100	100
Boom	110	200
Recession	90	–

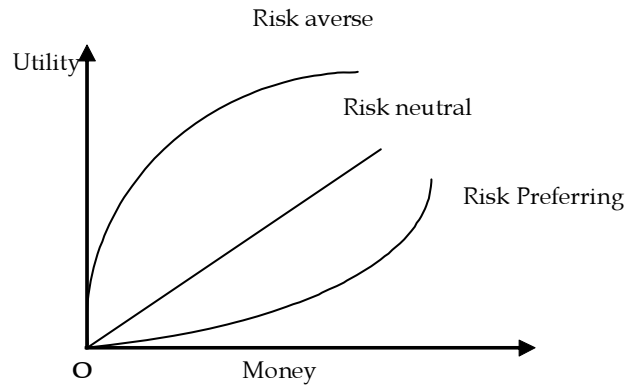
If we presume that the three states of the economy are equally likely, then expected value for each alternative is ₹ 100.

- A risk-seeker is one who, given an option between more or less risky alternatives with like expected values, prefers the riskier alternative that is, alternative B.
- A risk averted would choose the less risky alternative that is, alternative A.
- The person who is indifferent to risk (risk neutral) would be indifferent to both alternative A and B, as they have same expected values.

The empirical facts show that mass of investors are risk-averse. Some generalisations concerning the general shape of utility functions are probable. People normally regard money as a desirable commodity, and the utility of a large sum is usually greater than the utility of a smaller sum. Generally a utility function has a positive slope over a suitable range of money values, and the slope probably does not vary in response to small changes in the stock of money. For little changes in the amount of money going to an individual, the slope is constant and the utility function is linear. If the utility function is linear, the decision-maker maximises anticipated utility by maximising expected monetary value. Though, for large variations in the amount of money, this is probable to be the case. For large losses and large gains, the utility function often approaches upper and lower limits. The slope of the curve will usually increase sharply as the amount of loss increases, as the disutility of a large loss is proportionately more than the disutility of a small loss, but the curve will flatten as the loss becomes very large. For a risk-averse decision-maker, the normal utility of a function is less than the utility of the anticipated monetary value. It is also possible for the decision-maker to be risk favouring, at least over some range of the utility function. In this case, the expected utility of a function is more than the utility of the Expected Monetary Value (EMV).

Notes

Figure 4.4: Utility function and Risk Taking



Self Assessment

State whether the following statements are true or false:

15. In an efficient capital market, the significant principle to consider is that, investors should not hold all their eggs in one basket.

16. The empirical facts show that mass of investors are risk-averse.

Case Study

Product-Risk Analyses at General Motors

General Motors faced a fuel tank issue analogous to that in the Ford Pinto case in two cases. The first was a 1998 Georgia case, Moseley v. General Motors Corp., Moseley v. General Motors Corp., 447 S.E.2d 302 (Ga. Ct. App. 1994), rev'd, Webster v. Boyett, 496 S.E.2d 459 (Ga. 1998), which involved a side saddle fuel tank design that had been the target of numerous other lawsuits. In this particular case, Moseley was driving a GM pickup truck that was hit broadside by a drunk driver of another pickup truck. Moseley survived the crash and suffered no internal injuries, but the gas tank ruptured and the truck caught fire, and Moseley was burned alive after impact. The jury concluded that the product defect pertained not simply to the placement of the fuel tanks, but also to the straps that bound the tank to the car and could potentially puncture the tank.

In terms of the overall risk posed by this particular truck design, GM trucks did not fare much worse than Ford trucks: The GM trucks had 1.51 deaths per 10,000 crashes, as compared to 1.45 deaths per 10,000 crashes for Ford. GM's extensive testing of the fuel tank system was the object of the litigation. The truck exceeded NHTSA standards by a substantial degree: From a regulatory standpoint, the truck design was not inadequate. But a key witness in the case presented the detailed GM analysis of fuel-fed fires and the costs of eliminating them, making "they knew" the "constant refrain among the jurors interviewed." The jury awarded the plaintiffs $4 million in compensatory damages, $1 in pain and suffering, and $101 million in punitive damages. To calculate the punitive damages amount, the jurors engaged in an arbitrary mathematical exercise. They awarded an amount equal to twenty dollars for each of the 500,000 GM trucks on the road, and added a bonus $1 million "exclamation point."

Contd...

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The tank placement did have a constructive purpose in the vehicle design. GM wanted the truck to have a large fuel capacity so that drivers would not need to refuel the trucks frequently. Achieving this objective required the use of two tanks located outside of the frame rails that comprise the underbody of the truck.

In a 1973 analysis, GM engineer Edward Ivey prepared a benefit-cost analysis of the fuel fed fire fatality issue. It is instructive to review this analysis in detail. Consider first his calculation of the health costs associated with fuel fed fires. Based on Ivey's "value analysis," there would be a maximum of "500 fatalities per year in accidents with fuel fed fires where the bodies were burnt." He assigned each fatality a value of $200,000, thus following the same approach taken in the Ford Pinto analysis. Multiplying five hundred fatalities by the value of $200,000 each, and dividing by the forty-one million GM automobiles currently on the highways, yielded an estimated fatality cost of approximately $2.40 per automobile. He then amended this calculation to focus on new models sold during the current model year, for which he estimated fifty-five fatalities for the five million new models, leading to an estimated accident cost of $2.20 per new-model automobile.

He concluded:

This analysis indicates that for G.M. it would be worth approximately $2.20 per new model auto to prevent a fuel fed fire in all accidents. . . . This analysis must be tempered with two thoughts. First, it is really impossible to put a value on human life. This analysis tried to do so in an objective manner but a human fatality is really beyond value, subjectively. Secondly, it is impossible to design an automobile where fuel fed fires can be prevented in all accidents unless the automobile has a non-flammable fuel.

It is noteworthy that this analysis pertains to fuel fed fires more generally, and not to those in the specific target population of vehicles that was the object of the litigation. It is likely that the risks will be quite different for trucks with side saddle fuel tanks rather than the entire fleet of motor vehicles sold by GM. Consequently, the Ivey memo is not directly pertinent to the specific aspects of the Moseley case, except insofar as the memo indicated the character of corporate thinking. As in the case of the Ford Pinto analysis, the $200,000 value per fatality uses a compensatory damages measure of the value of life, which was the approach used by NHTSA at that time. This amount is smaller than the willingness-to-pay measure of the value of life developed later in the economics literature.

The GM approach was consistent with state-of-the-art research on value-of-life estimates at that time. Just as companies should be judged against the state-of-the-art with respect to scientific knowledge pertaining to safety designs rather than the state of future knowledge, they should not be expected to have applied methods of analysis that had not been developed by economic literature until after the corporate decisions in question were made. In the 1970s the dominant approach to measuring the value of life was the human capital method, which focused on the present value of the lost earnings of the deceased. This was, for example, the basis for the government's approach with respect to traffic safety. Indeed, the first estimates of the value of life from a prevention standpoint using the appropriate concept of the value of a statistical life did not occur until later in the 1970s. Federal agencies did not use this concept until 1982, after a debate between the Occupational Safety and Health Administration (OSHA) and the U.S. Office of Management and Budget over the merits of the proposed hazardous communication regulation, which was appealed to then-Vice President Bush. Based on OSHA's analysis using human capital assessments, which he termed the "costs of death," the costs of the regulations exceeded the benefits. Using the willingness-to-pay measure of the value of life, however, the benefits exceeded the costs. For all contemporary benefit-cost analyses, one would expect the value-of-life measure to reflect the willingness-to-pay value, as in Scenario 4. [Scenario 4 - used

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in jury study] To determine whether the safety improvement was worthwhile, the company used a value of $3 million per accidental death, which is the value used by the National Highway Traffic Safety Administration in setting auto safety standards. The company estimated that the annual safety benefits of this safer design would be $30 million (10 expected deaths at $3 million per death), while the cost would be $40 million. As a result, the company believed that other safety improvements might save more lives at less cost.

The Ivey memo played a pivotal role in the July 9, 1999 Los Angeles jury verdict against GM in a case involving a rear-end crash, which involved a rear- end crash into a 1979 Chevrolet Malibu. The record-setting verdict consisted of $107.8 million in compensatory damages for the six burn victims as well as $4.8 billion in punitive damages. Many observers speculated that the 1997 and 1998 landmark cigarette settlements of the state attorneys general lawsuits provided an anchor that led the jury to think in terms of billions of dollars rather than millions.

The basic facts of the case are similar to those of many other burn injury cases. On Christmas Eve in 1993, Patricia Anderson was driving home from church with her four children and a friend of the family. After slowing to stop for a red light, her Chevrolet Malibu was hit from the rear by a drunk driver believed to be going fifty miles per hour by the plaintiffs and seventy miles per hour by the defendant. The ensuing fire in the Malibu caused severe burn injuries to the passengers, including some disfigurement.

Once again the Ivey memo played a prominent role in the courtroom battle even though GM maintained that the memo did not contribute to the vehicle's design. The cost of a safer design that could have prevented the injury by moving the gas tank twenty inches away from the rear bumper rather than eleven inches was $8.59 per vehicle, according to evidence presented by the plaintiffs. The Ivey memo loomed particularly large as the plaintiff's attorney claimed that it showed that GM was "caught red handed." According to Ivey's analysis, the cost to the company of fuel tank fires was $2.40 per vehicle. Linking the memo with the $8.59 figure, which Ivey did not do, implied that the costs of safety to the company outweighed the benefits.

The plaintiff's lawyers demonized the GM decision as the result of an immoral calculation. As one of the lawyers observed after the trial, "'The jurors wanted to send a message to General Motors that human life is more important than profits." After the trial, jurors highlighted this tradeoff: "Jurors told reporters that they felt the company had valued life too lightly. We're just like numbers, I feel, to them, one juror, Carl Vangelisti, told Reuters Statistics. "That's something that is wrong."

By their very nature risk analyses convert life and death issues into statistics. Moreover, benefit-cost tests intrinsically involve cost-health tradeoffs that some may find shocking. One juror reflected a zero-risk mentality rather than a more rational risk tradeoff mentality in her comment: "There was no evidence that the car they put out there was as safe as what they could have put out there." But making such tradeoffs is inevitable. The task for the courts and society is to overcome the kinds of biases shown in the experimental results and vividly evidenced in the GM case.

Jurors' reckless disregard for rationality is reflected in their justification for the $4.8 billion punitive damages award. The jurors selected that figure by linking it to General Motors' advertising expenses over a long period. Linking damages to advertising expenses is entirely arbitrary. The amount was also "two-thirds more than GM's entire profit for 1998," which is a benchmark that shows the award magnitude, but is also unrelated to safety decisions for 1979 Chevrolet Malibus. This kind of voodoo economics which the jury viewed as a sound basis for decisions contrasts with the much more reasoned balancing

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Notes

in the Ivey memo. As the Washington Post observed, such punitive damages awards "send a message to the public at large that the courts are more like a casino than a hall of justice."

Undertaking at least part of a benefit-cost analysis and making some judgments regarding the desirability of safety measures is not unique to these specific cases. For example, the plaintiffs in another case focused on allegedly faulty door latches in the Chevrolet Blazer. The plaintiffs claimed that GM estimated a $216 million parts cost and a $700 million labour cost if a recall was initiated, for a total amount of $916 million. Evidence of an internal timeline of GM's cost analysis, which indicated that GM knew of the safety latch problem and what it would cost to fix it, contributed to a $150 million damage award, of which $100 million was for punitive damages, in the case of a man paralyzed after his Blazer crashed. Indeed, even more fundamental efforts by the company to learn about its products' dangers, such as crash test results and video tapes of those crash tests, can and have been used against it in litigation.

These and other cases show that courts split on how to treat defendants' knowledge of safety issues. Courts should uniformly incorporate benefit-cost analysis, risk-utility tests, and balancing efforts into negligence standards. This is the goal of our legal system and regulatory oversight efforts. In practice, however, undertaking a thorough analysis of the risks, comparing the risk costs and benefits, and then, in accordance with the result of the risk analysis, proceeding not to undertake the most vigilant safety measures identified may severely damage a company if jurors regard this knowledge as grounds for punitive damages.

This review of cases indicates that juries often regard corporate risk analyses as red flags. Rather than indicating concern with appropriate safety levels, such risk assessments may be viewed as an indication of callous disregard for human health. The evidence in the case analyses is consequently quite consistent with the mock juror evidence.

Question

Discuss the results in details.

Source: http://users.wfu.edu/palmitar/Law&Valuation/chapter%202/2-1-5MalibuCase.htm

4.9 Summary

- Corporations are run by people and therefore open to problems associated with their faulty judgments. Besides, corporations operate in a highly dynamic and competitive environment, and many operate both nationally and internationally.
- As a consequence, the judgment factor still rules investment decisions. Risk can be defined as the probability that the expected return from the security will not materialise. Every investment involves uncertainties that make future investment returns risk-prone. Uncertainties could be due to the political, economic and industry factors.
- Risk could be systematic in future, depending on its source.
- Beta is a measure of the systematic risk of a security that cannot be averted through diversification.
- Beta is a comparative measure of risk – the risk of an individual stock relative to the market portfolio of all stocks.
- If the security's returns move more (less) than the market's returns as the latter changes, the security's returns have more (less) volatility (fluctuations in price) than those of the market.

Notes

- The risk/return trade-off could clearly be called the "ability-to-sleep-at-night test."
- While some people can deal with the equivalent of financial skydiving without batting an eye, others are terrified to climb the financial ladder without a secure harness.
- The investor can minimise his risk on the portfolio. Risk avoidance and risk minimisation are the important aims of portfolio management.
- A portfolio contains different securities; by combining their weighted returns we can find the expected return of the portfolio.

4.10 Keywords

Beta: It is a measure of the systematic risk of a security that cannot be avoided through diversification.

Bull-Bear Market Risk: This risk arises from the variability in the market returns resulting from alternating bull and bear market forces.

Country Risk: Country risk, also referred to as political risk, is an important risk for investors today.

Default Risk: It is that portion of an investment's total risk that results from changes in the financial integrity of the investment.

Liquid Assets Risk: It is that portion of an asset's total variability of return which results from price discounts given or sales concessions paid in order to sell the asset without delay.

Liquidity Risk: Liquidity risk is the risk associated with the particular secondary market in which a security trades.

Non-systematic Risk: The variability in a security's total returns not related to overall market variability is called the non-systematic (non-market) risk.

Risk: Risk is associated with the variability of the rates of return from an investment.

4.11 Review Questions

1. Define risk and return.
2. What do you mean by security return?
3. What are the different types of risk influences on investment?
4. Explain systematic and unsystematic risk.
5. Define beta. How does it influence on investment decision – making process?
6. Define Alpha.
7. How do you measure historical return and risk?
8. Write the different steps in calculating expected return and risk.
9. What do you mean by portfolio diversification?

Answers: Self Assessment

1. Systematic
2. Unsystematic
3. True
4. False

Notes

5.	Risk	6.	Direct
7.	False	8.	True
9.	Securities	10.	Expected
11.	True	12.	False
13.	Average	14.	Correlation
15.	True	16.	True

4.12 Further Readings

Books

Bonus Shares: A Study of the Dividend and Price Effects of Bonus Shares Issues, Bombay, Macmillan, 1973.

Gup, Benton E.: Basics of Investing, N.Y. Wiley, 1979.

Gupta, S.N.: Bonds and Guarantees, Delhi, Commercial Law Publications, 1981.

Gupta, Umrao Lal: Working of Stock Exchange in India, New Delhi, Thomson Press, 1972.

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www.tax4india.com/risk-and-return-analysis.html

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Unit 5: Trading System in Stock Exchange

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Objectives

After studying this unit, you will be able to:

- Explain the advantages of the screen-based trading system
- Discuss the market types
- Elaborate the order management
- Discuss the trade management

Introduction

Most of the trading in the Indian stock market takes place on its two stock exchanges: the Bombay Stock Exchange (BSE) and the National Stock Exchange (NSE). The BSE has been in existence since 1875. The NSE, on the other hand, was founded in 1992 and started trading in 1994. However, both exchanges follow the same trading mechanism, trading hours, settlement process, etc. At the last count, the BSE had about 4,700 listed firms, whereas the rival NSE had about 1,200. Out of all the listed firms on the BSE, only about 500 firms constitute more than 90% of its market capitalization; the rest of the crowd consists of highly illiquid shares.

5.1 Screen-based Trading System

In the past, the trading on stock exchanges in India was based on open outcry system. Under the system, brokers assemble at a central location usually the exchange trading ring, and trade with each other. This was time consuming, inefficient and imposed limits on trading volumes and trading hours. In order to provide efficiency, liquidity and transparency, NSE introduced a nation-wide on-line, fully-automated Screen-based Trading System (SBTS). Under this system a trading member can punch into the computer, the number of securities and the prices at which he would like to transact. The transaction is executed as soon as it finds a matching sell or buys order from a counter party. This system was readily accepted by market participants and in the very first year of its operation, NSE became the leading stock exchange in the country.

Technology has been used to carry the trading platform from the trading hall of stock exchanges to the premises of brokers. NSE carried the trading platform further to the PCs at the residence of investors through the Internet. This made a huge difference in terms of equal access to investors in a geographically vast country like India.

The trading network is depicted in Figure 5.1. NSE has a main computer which is connected through Very Small Aperture Terminal (VSAT) installed at NSE office. The main computer runs on a fault tolerant STRATUS mainframe computer at the Exchange. Brokers have terminals (identified as the PCs in the Figure 5.1) installed at their premises which are connected through VSATs/leased lines/modems.

5.1.1 Advantages of the Screen-based Trading System

Screen-based trading system consists of the following advantages:

- It electronically matches orders on a strict price/time priority and hence cuts down on time, cost and risk of error, as well as on fraud resulting in improved operational efficiency.
- It allows faster incorporation of price sensitive information into prevailing prices, thus increasing the informational efficiency of markets.
- It enables market participants, irrespective of their geographical locations, to trade with one another simultaneously, improving the depth and liquidity of the market.

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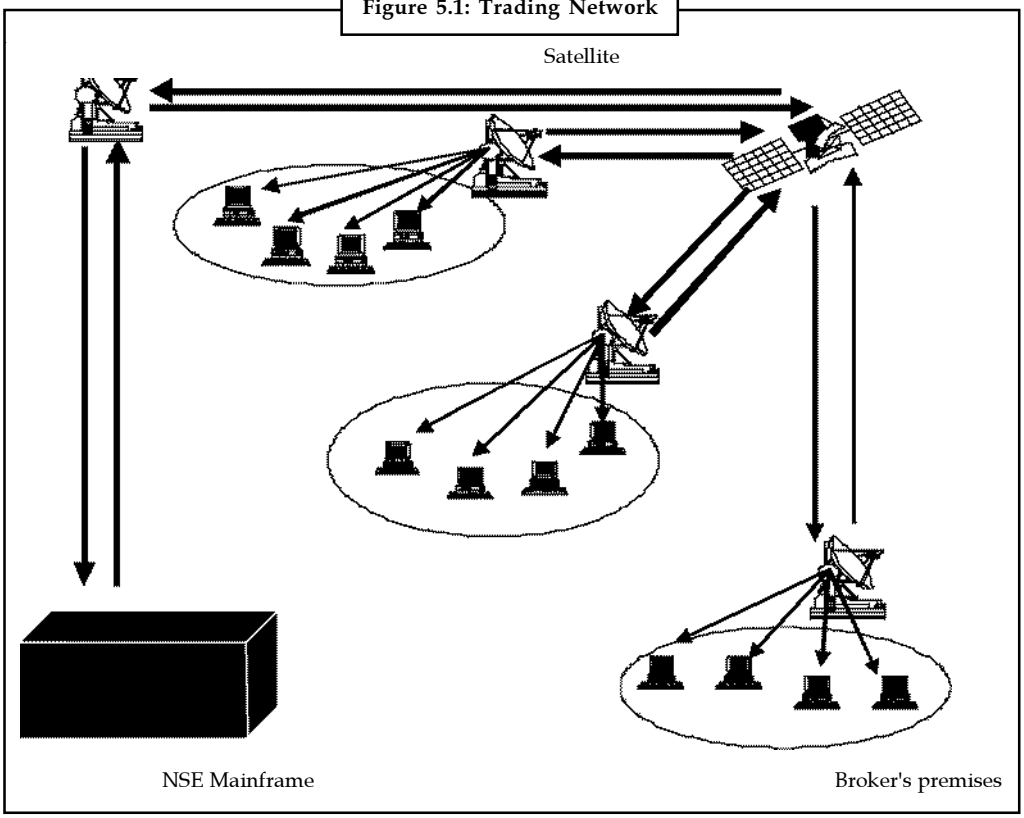
- It provides full anonymity by accepting orders, big or small, from members without revealing their identity, thus providing equal access to everybody.
- It also provides a perfect audit trail, which helps to resolve disputes by logging in the trade execution process in entirety.

Figure 5.1: Trading Network



An investor informs a broker to place an order on his behalf. The broker enters the order through his personal computer, which runs under Windows NT and sends signal to the Satellite via VSAT/leased line/modem. The signal is directed to a mainframe computer at NSE via VSAT at NSE's office. A message relating to the order activity is broadcast to the respective member. The order confirmation message is immediately displayed on the PC of the broker. This order matches with the existing passive order(s), otherwise it waits for the active orders to enter the system. On order matching, a message is broadcast to the respective member.

The trading system operates on a strict price time priority. All orders received on the system are sorted with the best priced order getting the first priority for matching i.e., the best buy orders match with the best sell order. Similar priced orders are sorted on time priority basis, i.e. the one that came in early gets priority over the later one. Orders are matched automatically by the computer keeping the system transparent, objective and fair. Where an order does not find a match, it remains in the system and is displayed to the whole market, till a fresh order comes in or the earlier order is cancelled or modified. The trading system provides tremendous flexibility to the users in terms of kinds of orders that can be placed on the system. Several time-related (immediate or cancel), price-related (buy/sell limit and stop loss orders) or volume related (disclosed quantity) conditions can be easily built into an order. The trading system also provides complete market information on-line. The market screen at any point of time provides complete information on total order depth in a security, the five best buys and sells available in the market, the quantity traded during the day in that security, the high and the low, the last traded

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price, etc. Investors can also know the fate of the orders almost as soon as they are placed with the trading members. Thus, the National Exchange for Automated Trading (NEAT) system provides an Open Electronic Consolidated Limit Order Book (OECLOB).

Caution Limit orders are orders to buy or sell shares at a stated quantity and price.

If the price-quantity conditions do not match, the limit order will not be executed. The term 'limit order book' refers to the fact that only limit orders are stored in the book and all market orders are crossed against the limit orders sitting in the book. Since the order book is visible to all market participants, it is termed as an 'Open Book'.

5.1.2 NEAT System

NSE is the first exchange in the world to use satellite communication technology for trading. Its trading system, called National Exchange for Automated Trading (NEAT), is a state of-the-art client server based application. At the server end all trading information is stored in an in memory database to achieve minimum response time and maximum system availability for users. It has uptime record of 99.7%. For all trades entered into NEAT system, there is uniform response time of less than one second. The NEAT system supports an order driven market, wherein orders match on the basis of time and price priority. All quantity fields are in units and prices are quoted in Indian Rupees. The regular lot size and tick size for various securities traded is notified by the Exchange from time to time.

Self Assessment

Fill in the blanks:

1. Technology has been used to carry the trading ..... from the trading hall of stock exchanges to the premises of brokers.
2. ..... carried the trading platform further to the PCs at the residence of investors through the Internet.
3. The trading system operates on a strict ..... priority.
4. The best buy orders match with the ..... order.

Caselet

Philadelphia Stock Exchange

It is the oldest securities exchange in the United States but there is nothing antique about the Philadelphia Stock Exchange's approach to information security. Other companies hold their breath and cross their fingers, hoping only authorized people gain access to critical data that's password-protected, and that security patches and encryption strategies hold back the flood of malware waiting to attack from the outside. The Exchange, on the other hand, developed a strategy to "find the problems before they find you."

The proactive path led the Exchange straight to Safend. Safend, headquartered in Tel Aviv, Israel with a US office in Philadelphia, develops security software for network endpoints. Specifically, Safend solutions address the vulnerabilities presented by peripheral connections such as USB, removable media, and wireless devices.

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When Allan Pomerantz, CSO for the Exchange, went shopping for an endpoint security solution, Safend made the short list. "We looked at a couple of other products, but after seeing the demo for Safend's USB Port Protector, I requested that Gene meet with them." Pomerantz says.

Safend offers a free tool that identifies potential security leaks, so Gene Peters, Director of Information Services for the Exchange, ran Safend's Auditor on their network. The free download provides a list of all devices that are or have been connected to the network within the last six months. The vulnerabilities exposed after running the USB Auditor are, at best, unsettling to most companies' security personnel. But at the Exchange, Peters was not disturbed by what he saw. "We run a tight security environment," he says. "USB Auditor really didn't find anything we weren't aware of." He does, however, agree: "Auditor is a very interesting tool."

Tight security notwithstanding, the Exchange's IT department is not in denial. Sarbanes-Oxley and a flood of news stories touting the failure of other big-name companies to keep private records under wraps has put security centre stage in the financial community. With 400 machines to secure and a small staff, Peters knew he would either have to find a creative solution to the threat of data tampering and theft via physical ports or start rebuilding PCs. Safend provided the answer with their newest product, Safend Protector.

"Safend's products are well thought out and actually accomplish more than we expected," he asserts. "The product is robust, helping us in our proactive quest to identify potential problems."

Safend Protector provides data access control from the physical ports of all enterprise endpoints, such as USB, FireWire, WiFi, Bluetooth, Infrared (IrDA), and CD/DVDs yet allows IT management to customize user policies.

"The theft of intellectual property is a major concern in most corporate environments, including ours," says Pomerantz. "However, even more troubling for us is the risk of someone walking in here, plugging in a USB device, and uploading malware. Safend Protector will help us reduce that risk."

Source: http://wave.com/case-study-philadelphia-stock-exchange

5.2 Market Types

The Capital Market system has four types of market:

1. ***Normal Market:*** Normal market consists of various book types in which orders are segregated as Regular Lot Orders, Special Term Orders, and Stop Loss Orders depending on the order attributes.
2. ***Auction Market:*** In the auction market, auctions are initiated by the exchange on behalf of trading members for settlement related reasons.
3. ***Odd Lot Market:*** The odd lot market facility is used for the Limited Physical Market and for the Block Trades Session.
4. ***Retail Debt Market:*** The RETDEBT market facility on the NEAT system of capital market segment is used for transactions in Retail Debt Market session. Trading in Retail Debt Market takes place in the same manner as in equities (capital market) segment.

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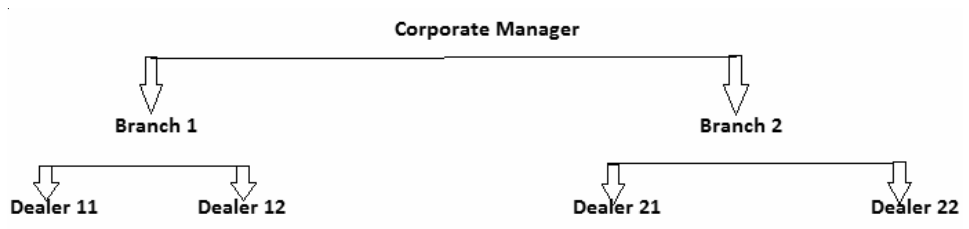
5.2.1 Trading System Users Hierarchy

The trading member has the facility of defining a hierarchy amongst its users of the NEAT system. This hierarchy is depicted in Figure 5.2.

Figure 5.2: Trading System Users Hierarchy



The users of the trading system can logon as either of the user type. The significance of each type is explained below:

1. ***Corporate Manager:*** The corporate manager is a term assigned to a user placed at the highest level in a trading firm. Such a user receives the end-of-day reports for all branches of the trading member. The facility to set branch order value limits and user order value limits is available to the corporate manager. The corporate manager also has facility to set symbol wise user order quantity limit. He can view outstanding orders and trades of all users of the trading member and can also cancel/modify outstanding orders of all users of the trading member.
2. ***Branch Manager:*** The branch manager is a term assigned to a user who is placed under the corporate manager. The branch manager receives end-of-day reports for all the dealers under that branch. He can set user order value limit for each of his branch. He can view outstanding orders and trades of all users of his branch and can also cancel/modify outstanding order of all users of his branch.
3. ***Dealer:*** Dealers are users at the lowest level of the hierarchy. A dealer can view and perform order and trade related activities only for himself and do not have access to information on other dealers under either the same branch or other branches.

5.2.2 Local Database

The local database provides a faster response time to the users. All inquiries made by a user for own orders/trades are serviced through the local database. If however, a corporate manager or branch manager makes inquiries for orders of any dealer/branch manager of the trading firm, then the inquiry is serviced by the host. The data stored in the local database include system messages, security related information and order/trade related data of the user.

5.2.3 Market Phases

The trading system is normally made available for trading on all days except Saturdays, Sundays and other holidays. Holidays are declared by the Exchange from time to time. A trading day typically consists of a number of discrete stages which are mentioned below:

1. ***Opening:*** The trading member can carry out the following activities after login to the NEAT system and before the market opens for trading:
   (a) Set up Market Watch (the securities which the user would like to view on the screen)
   (b) View Inquiry screens

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At the point of time when the market is opening for trading, the trading member cannot login to the system. A message 'Market status is changing. Cannot logon for sometime' is displayed. If the member is already logged in, he cannot perform trading activities till market is opened.

2. ***Pre-open:*** The pre-open session is for duration of 15 minutes i.e. from 9:00 a.m. to 9:15 a.m. The pre-open session is comprised order collection period and order matching period.

   The order collection period of 8* minutes shall be provided for order entry, modification and cancellation. (* System driven random closure between 7th and 8th minute). During this period orders can be entered, modified and cancelled.

   The information like Indicative equilibrium/opening price of scrip, total buy and sell quantity of the scrip is disseminated on the NEAT Terminal to the members on real time basis.

Notes Indicative NIFTY Index value & % change of indicative equilibrium price to previous close price are computed based on the orders in order book and are disseminated during pre-open session.

Order matching period starts immediately after completion of order collection period. Orders are matched at a single (equilibrium) price which will be open price. The order matching happens in the following sequence:

- Eligible limit orders are matched with eligible limit orders
- Residual eligible limit orders are matched with market orders
- Market orders are matched with market orders

During order matching period order modification, order cancellation, trade modification and trade cancellation is not allowed. The trade confirmations are disseminated to respective members on their trading terminals before the start of normal market. After completion of order matching there is a silent period to facilitate the transition from pre-open session to the normal market. All outstanding orders are moved to the normal market retaining the original time stamp. Limit orders are at limit price and market orders are at the discovered equilibrium price. In a situation where no equilibrium price is discovered in the pre-open session, all market orders are moved to normal market at previous day's close price or adjusted close price/base price following price time priority. Accordingly, Normal Market/Odd lot Market and Retail Debt Market open for trading after closure of pre-open session i.e. 9:15 a.m. Block Trading session is available for the next 35 minutes from the open of Normal Market.

The opening price is determined based on the principle of demand supply mechanism. The equilibrium price is the price at which the maximum volume is executable. In case more than one price meets the said criteria, the equilibrium price is the price at which there is minimum unmatched order quantity. In case more than one price has same minimum order unmatched quantity, the equilibrium price is the price closest to the previous day's closing price. In case the previous day's closing price is the mid-value of pair of prices which are closest to it, then the previous day's closing price itself will be taken as the equilibrium price. In case of corporate action, previous day's closing price is adjusted to the closing price or the base price. Both limit and market orders are reckoned for computation of equilibrium price. The equilibrium price determined in pre-open session is considered as open price for the day. In case if only market orders exists both in

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the buy and sell side, then order is matched at previous days close price or adjusted close price/base price. Previous day's close or adjusted close price/base price is the opening price. In case if no price is discovered in pre-open session, the price of first trade in the normal market is the open price.

3. ***Normal Market Open Phase:*** The open period indicates the commencement of trading activity. To signify the start of trading, a message is sent to all the trader workstations. The market open time for different markets is notified by the Exchange to all the trading members. Order entry is allowed when all the securities have been opened. During this phase, orders are matched on a continuous basis. Trading in all the instruments is allowed unless they are specifically prohibited by the Exchange. The activities that are allowed at this stage are Inquiry, Order Entry, Order Modification, Order Cancellation (including quick order cancellation), Order Matching and Trade Cancellation.
4. ***Market close:*** When the market closes, trading in all instruments for that market comes to an end. A message to this effect is sent to all trading members. No further orders are accepted, but the user is permitted to perform activities like inquiries and trade cancellation.
5. ***Post-close Market:*** This closing session is available only in Normal Market Segment. Its timings are from 3.50 p.m. to 4.00 p.m. Only market price orders are allowed. Special Terms, Stop Loss and Disclosed Quantity Orders, Index Orders are not allowed. The trades are considered as Normal Market trades. Securities not traded in the normal market session are not allowed to participate in the Closing Session.
6. ***SURCON:*** Surveillance and Control (SURCON) is that period after market close during which, the users have inquiry access only. After the end of SURCON period, the system processes the data for making the system available for the next trading day. When the system starts processing data, the interactive connection with the NEAT system is lost and the message to that effect is displayed at the trader workstation.

5.2.4 Logging On

On starting NEAT application, the logon screen appears with the following detail:

1. User ID
2. Trading Member ID
3. Password

Did u know? In order to sign on to the system, the user must specify a valid User ID, Trading Member ID and the corresponding password. A valid combination of User ID, Trading Member ID and the password is needed to access the system.

Following are the details of the Log-on screen:

1. ***User ID:*** Each trading member can have more than one user ID. The number of users allowed for each trading member is notified by the Exchange from time to time. Each user of a trading member must be registered with the Exchange and is assigned a unique user ID.
2. ***Trading Member ID:*** The Exchange assigns a trading member ID to each trading member. The trading member ID is unique and functions as a reference for all orders/trades of different users. This ID is common for all the users of a particular trading member. The trading member ID and user IDs form a unique and valid combination.

   It is the responsibility of the trading member to maintain adequate control over the persons having access to user IDs. The trading member should request the Exchange for

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changes in names of the users of user ID, especially when there are changes in the users who are dealing on behalf of the trading member.

3. ***Password:*** When a user logs in for the first time, he has to enter the default password 'NEATCM' provided by the exchange. On entering this password, the system requests the user to enter a new password in the `New Password' field. On entering the new password the system requests for confirmation of this new password. This new password is known to the user only.

Box 5.1: Features of User ID and Password

Location Specific User ID: Earlier, it was possible for the members having connectivity at more than one location to use the allotted user IDs interchangeably from either location. This gave rise to various systems security related problems. To reduce such potential risks associated with the member's workstation, the exchange assigns user ID to a specific location. So, whenever a user attempts to log on to the trader workstation, the system checks for a valid location for that user ID in the database at the host end.

Password:

- The password should contain minimum of six characters and maximum of eight characters in length. A combination of characters and numbers is allowed in the password.
- The password can be changed if the user desires so and a new password can be entered. The new password must be different from the old password.
- Password appears in the encrypted form and thus complete secrecy is maintained. The system ensures the change in password for all users (password expiry period is parameterized by the exchange).
- In the event of the user forgetting his password, the trading member is required to reset the password from his corporate manager user id. In case the corporate manager id is disabled then he is required to inform the exchange in writing, requesting to reset the password. The user password is reset to the default password set by the exchange. The user can login by entering a new password as per the procedure outlined above.
- When a user tries to login with a wrong password a message 'Invalid Sign on' is displayed. If three attempts are made by a user to log on with an incorrect password, then that user is automatically disabled. In case of such an event, the trading member is required to reset the password from his corporate manager user id. In case the corporate manager id is disabled then he is required to makes a written request to the exchange for resetting of password. The user password is reset to the default password set by the exchange. The user can login by entering a new password as per the procedure outlined above.

5.2.5 Log Off/Exit from the Application

One can exit from the application as and when one desires before the surcon period. On invoking the log off screen, the following options are displayed to the user.

1. ***Permanent Sign Off:*** As the name suggests, a user can log off permanently from the trading system by selecting this option. The user is logged off and the log on screen appears.
2. ***Temporary Sign Off:*** Temporary sign off is a useful feature that allows the user to disallow the use of the trading software without actually logging off. During a temporary sign-off

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period, the application continues to receive all market updates in the background. The user, however, cannot enter orders or make inquiries. This allows the user to leave the trading system temporarily inactive and prevents unauthorized access to the system. On selecting the temporary sign off option, a password entry screen is displayed. The use of the NEAT system is enabled on entering the correct password. The temporary sign off is automatically activated when the user is inactive for a period of 5 minutes. The user has to enter the password to resume activities. If three attempts are made to sign on with an incorrect password, the user is permanently logged off. In this case the user has to log on again.

3. ***Exit:*** On selection of this option, the user comes out of sign off screen.

5.2.6 NEAT Screen

The trader workstation screen of the trading member is divided into the following windows:

1. ***Title bar:*** It displays trading system name i.e. NEAT, the trading member name the user Id, user type, the date and the current time.

2. ***Ticker Window:*** The ticker displays information of all trades in the system as and when it takes place. The user has the option of selecting the securities that should appear in the ticker. Securities in ticker can be selected for each market type. On the extreme right hand of the ticker is the on-line index window that displays the current index value of NSE indices namely S&P CNX Nifty, S&P CNX Defty, CNX Nifty Junior, S&P CNX500, CNX Midcap, CNX IT, Bank Nifty, CNX 100 and Nifty Midcap 50, CNX Realty, CNX MNC, CNX FMCG, CNX Energy, CNX Infra, CNX Pharma, CNX PSU Bank, CNX PSE and CNX Service and India VIX. The user can scroll within these indices and view the index values respectively. Index point change with reference to the previous close is displayed along with the current index value. The difference between the previous close index value and the current index value becomes zero when the Nifty closing index is computed for the day.

   The ticker window displays securities capital market segments. The ticker selection facility is confined to the securities of capital market segment only. The first ticker window, by default, displays all the derivatives contracts traded in the Futures and Options segment.

3. ***Tool Bar:*** The toolbar has functional buttons which can be used with the mouse for quick access to various functions such as Buy Order Entry, Sell Order Entry, Market By Price (MBP), Previous Trades (PT), Outstanding Order (OO), Activity Log (AL), Order Status (OS), Market Watch (MW), Snap Quote (SQ), Market Movement (MM), Market Inquiry (MI), Auction Inquiry (AI), Order Modification (OM), Order Cancellation (OCXL), Security List, Net Position, Online Backup, Supplementary Menu, Index Inquiry, Index Broadcast and Help. All these functions are also accessible through the keyboard.

4. ***Market Watch Window:*** The 'Market Watch' window is the main area of focus for a trading member. This screen allows continuous monitoring of the securities that are of specific interest to the user. It displays trading information for the selected securities.

5. ***Inquiry Window:*** This screen enables the user to view information such as Market by Order (MBO), Market By Price (MBP), Previous Trades (PT), Outstanding Orders (OO), Activity Log (AL), Order Status (OS), Market Movement (MM), Market Inquiry (MI), Net Position, Online Backup, Index Inquiry, Indices Broadcast, Most Active Securities and so on. Relevant information for the selected security can be viewed.

6. ***Snap Quote:*** The snap quote feature allows a trading member to get instantaneous market information on any desired security. This is normally used for securities that are not

already set in the Market Watch window. The information presented is the same as that of the Marker Watch window.

7. ***Order/Trade Window:*** This window enables the user to enter/modify/cancel orders and to send request for trade cancellation and modification.

8. ***Message Window:*** This enables the user to view messages broadcast by the exchange such as corporate actions, any market news, auctions related information etc. and other messages like order confirmation, order modification, order cancellation, orders which have resulted in quantity freezes/price freezes and the exchange action on them, trade confirmation, trade cancellation/modification requests and exchange action on them, name and time when the user logs in/logs off from the system, messages specific to the trading member, etc. These messages appear as and when the event takes place in a chronological order.

Self Assessment

State whether the following statements are true or false:

5. Abnormal market consists of various book types in which orders are segregated as Regular Lot Orders, Special Term Orders, and Stop Loss Orders depending on the order attributes.

6. In the auction market, auctions are initiated by the exchange on behalf of trading members for settlement related reasons.

7. The trading member has the facility of defining a hierarchy amongst its users of the NEAT system.

8. The corporate manager is a term assigned to a user placed at the highest level in a trading firm.

5.3 Order Management

Order Management consists of entering orders, order modification, order cancellation and order matching.

5.3.1 Entering Orders

The trading member can enter orders in the normal market, odd lot, RETDEBT and auction market. A user can place orders in any of the above mentioned markets by invoking the respective order entry screens. After doing so, the system automatically picks up information from the last invoked screen (e.g. Market Watch/MBP/OO/SQ and Security List). When the user invokes the order entry screen, the fields that are taken as default are Symbol, Series and Book Type.

In case of other fields, the system takes the following defaults:

Qty	Regular lot quantity available at best price on counter side
Price	Price of best counter order
Pro	Trading member ID of the user
Order Duration	Day
Disclosed quantity	Fully Disclosed
Participant ID	Trading member ID of the user
Active & Passive Order	

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When any order enters the trading system, it is an active order. It tries to find a match on the other side of the books. If it finds a match, a trade is generated. If it does not find a match, the order becomes a passive order and goes and sits in the order book.

Order Books

As and when valid orders are entered or received by the trading system, they are first numbered, time stamped and then scanned for a potential match. This means that each order has a distinctive order number and a unique time stamp on it. If a match is not found, then the orders are stored in the books as per the price/time priority. Price priority means that if two orders are entered into the system, the order having the best price gets the higher priority. Time priority means if two orders having the same price is entered, the order that is entered first gets the higher priority. Best price for a sell order is the lowest price and for a buy order, it is the highest price.

The different order books in the NEAT system are as detailed below:

- ***Pre-open Book:*** An order during Preopen session has to be a Preopen (PO) order. All the Preopen orders are stacked in system till the Preopen phase. At the end of Preopen phase, the matching of Preopen orders takes place at the Final Opening Price. By default, the Preopen (PO) book appears in the order entry screen when the Normal Market is in Preopen and the security is eligible for Preopen Session. Order entry in preopen book type is allowed only during market status is in preopen.
- ***Regular Lot Book:*** An order that has no special condition associated with it is a Regular Lot order. When a dealer places this order, the system looks for a corresponding Regular Lot order existing in that market (Passive orders). If it does not find a match at the time it enters the system, the order is stacked in the Regular Lot book as a passive order. By default, the Regular Lot book appears in the order entry screen in the normal market. Buyback orders can be placed through the Regular Lot (RL) book in the Normal Market. The member can place a buyback order by specifying 'BUYBACKORD' in the Client Account field in the order entry screen. Such company buyback orders will be identified in MBP screen by an '*' (asterisk) indicator against such orders.
- ***Special Terms Book:*** Orders which have a special term attribute attached to it are known as special terms orders. When a special term order enters the system, it scans the orders existing in the Regular Lot book as well as Special Terms Book. Currently this facility is not available in the trading system.
- ***Stop Loss Book:*** Stop Loss (SL) orders are released into the market when the last traded price for that security in the normal market reaches or surpasses the trigger price. Before triggering, the order does not participate in matching and the order cannot get traded. Untriggered stop loss orders are stacked in the stop loss book. The stop loss orders can be either a market order or a limit price order. For buy SL orders, the trigger price has to be less than or equal to the limit price. Similarly, for sell SL orders, the trigger price has to be greater than or equal to the limit price.
- ***Odd Lot Book:*** The Odd Lot book can be selected in the order entry screen in order to trade in the Odd Lot market. Order matching in this market takes place between two orders on the basis of quantity and price. To enter orders in the odd lot market, select the book type as OL.
- ***RETDEBT Order Book:*** RETDEBT market orders can be entered into the system by selecting the RETDEBT Order book. These orders scan only the RETDEBT Order book for potential matches. If no suitable match can be found, the order is stored in the book as a passive order. To enter orders in the RETDEBT market, select the book type as 'D'.

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- ***Auction Order Book:*** Auction order book stores orders entered by the trading members to participate in the Exchange initiated auctions. Auction orders can be initiator orders, competitor orders and solicitor orders.

Symbol & Series

Securities can be taken as default values from the order entry screen from any of the inquiry screens such as MBP, OO, PT, AL, MI and SQ. In case the security is not set up in the Market Watch screen, the Security List can also be used to take the codes as default values.

Order entry in a security is not possible if that security is suspended from trading. For example, if a security is suspended in the normal market a message "Security is suspended in the normal market" is displayed on the order entry screen. The label 'Suspended' is also displayed in the market watch screen for the setup security.

Order entry is also not possible in case the security is not eligible to trade in a particular market. E.g. If a security is not eligible to trade in the normal market a message "Security is not allowed to trade in normal market" is displayed on the order entry screen. In case the user types the symbol series incorrectly a message "Invalid symbol series" is displayed on the screen.

Quantity

When the buy/sell order entry screen is invoked, the regular lot size available at the best price on the counter side gets defaulted in the order entry screen. In case auction book is selected for display, the quantity has to be specifically mentioned by the user. Quantity mentioned should be in multiples of regular lot size for that security.

Quantity Freeze

All orders with very large quantities will receive quantity alert at member terminal. Currently, if member enters any order exceeding the lowest of the quantity given below, results in an alert which will read as "Order entered exceeds alert quantity limit. Confirm availability of adequate capital to proceed" and only after the member clicks the button 'Yes' the order will be further processed for execution.

Quantity Freeze parameters:

(a) 0.5% of the issue size of the security or

(b) value of the order is around ₹ 2.5 crore or

(c) a global alert quantity limit of more than 25000 irrespective of the issue size of the security, whichever is less.

Price

Along with the regular lot quantity, the best price on the counterside is also taken as default value in the order entry screen. A user has the option to either enter the order at the default price or overwrite it with any other desired price. If a user mentions a price, it should be in multiples of the tick size for that particular security and within the day's minimum/maximum price range, otherwise the order is not accepted by the system and an order rejection message/ confirmation slip is generated. For No price band scrips (scrip), if a price outside the Operational Range is entered, the order results in a price freeze and is not accepted as a valid order till the time the Exchange approves it. All auction orders require the user to mention a price.

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In case the user enters an order with a 'Market' price, the order takes the last traded price in the respective market as the market price, provided no passive order exists on the same side or the counter side in that security and in that market. On the other hand, if suitable orders exist on the counter side, then the order takes the price of the counter order and a trade is generated. If an order exists on the same side but no orders exists on the counter side, then the order takes the price of the best order on that side and is stacked immediately below it. If the security has never been traded, then the market order takes the value of the base price and sits in the books as a passive order.

Another option provided to Users in the Pre-open phase of the Normal market is 'ATO' or the 'At Open Price' concept. 'Market' orders entered in the pre-open are termed as 'ATO'. Based on the opening algorithm, the system computes a potential opening price. Once the market is open for trading, the ATO orders take these prices.

In case of stop loss orders, a user has the flexibility of specifying a limit price along with the trigger price. This limit price can be selected as equal to the trigger price in the price field so as to leave it with the word 'Price'. Alternatively, a user can specify a limit price as 'Market' price.

Circuit Breakers

The Exchange has implemented index-based market-wide circuit breakers in compulsory rolling settlement with effect from July 02, 2001. In addition to the circuit breakers, price bands are also applicable on individual securities.

Index-based Market-wide Circuit Breakers: The index-based market-wide circuit breaker system applies at three stages of the index movement, either way viz. at 10%, 15% and 20%. These circuit breakers when triggered bring about a coordinated trading halt in all equity and equity derivative markets nationwide. The market-wide circuit breakers are triggered by movement of either the BSE Sensex or the S&P CNX Nifty, whichever is breached earlier.

(a) In case of a 10% movement of either of these indices, there would be a one-hour market halt if the movement takes place before 1:00 p.m. In case the movement takes place at or after 1:00 p.m. but before 2:30 p.m. there would be trading halt for 1/2 hour. In case movement takes place at or after 2:30 p.m. there will be no trading halt at the 10% level and market shall continue trading.

(b) In case of a 15% movement of either index, there would be a two-hour halt if the movement takes place before 1 p.m. If the 15% trigger is reached on or after 1:00 p.m., but before 2:00 p.m., there shall be a one-hour halt. If the 15% trigger is reached on or after 2:00 p.m. the trading shall halt for remainder of the day.

(c) In case of a 20% movement of the index, trading shall be halted for the remainder of the day.

These percentages are translated into absolute points of index variations on a quarterly basis. At the end of each quarter, these absolute points of index variations are revised for the applicability for the next quarter. The absolute points are calculated based on closing level of index on the last day of the trading in a quarter and rounded off to the nearest 10 points in case of S&P CNX Nifty.

Price Bands

Daily price bands are applicable on securities as below:

(a) Daily price bands of 2% (either way) on securities as specified by the Exchange.

(b) Daily price bands of 5% (either way) on securities as specified by the Exchange.

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(c) Daily price bands of 10% (either way) on securities as specified by the Exchange.

(d) No price bands are applicable on scrips on which derivative products are available or scrips included in indices on which derivative products are available. In order to prevent members from entering orders at non-genuine prices in such securities, the Exchange has fixed operating range of 20% for such securities.

(e) Price bands of 20% (either way) on all remaining scrips (including debentures, preference shares etc).

The price bands for the securities in the Limited Physical Market are the same as those applicable for the securities in the Normal Market. For auction market the price bands of 20% are applicable.

Order Types and Conditions

The system allows the trading members to enter orders with various conditions attached to them as per their requirements. These conditions are broadly divided into Time Conditions, Quantity Conditions, Price Conditions and Other Conditions. Several combinations of the above are allowed thereby providing enormous flexibility to the users. The order types and conditions are summarised below:

1. ***Time Conditions***

   (a) *DAY:* All orders entered into the system are currently considered as Day orders only.

   (b) *IOC:* An Immediate or Cancel (IOC) order allows the user to buy or sell a security as soon as the order is released into the system, failing which the order is cancelled from the system. Partial match is possible for the order, and the unmatched portion of the order is cancelled immediately.

2. ***Quantity Conditions***

   (a) *DQ:* An order with a Disclosed Quantity (DQ) allows the user to disclose only a portion of the order quantity to the market. For example, if the order quantity is 10,000 and the disclosed quantity is 2,000, then only 2,000 is released to the market. After this quantity is fully matched, a subsequent quantity of 2,000 is disclosed. Thus, totally five disclosures with the same order number are shown one after the other in the market.

3. ***Price Conditions***

   (a) *Market:* Market orders are orders for which price is specified as 'MKT' at the time the order is entered. For such orders, the system determines the price.

   (b) *Stop-Loss:* This facility allows the user to release an order into the system, after the market price of the security reaches or crosses a threshold price called trigger price.

Example: If for stop loss buy order, the trigger is ₹ 93.00, the limit price is ₹ 95.00 and the market (last traded) price is ₹ 90.00, then this order is released into the system once the market price reaches or exceeds ₹ 93.00. This order is added to the regular lot book with time of triggering as the time stamp, as a limit order of ₹ 95.00.

All stop loss orders are kept in a separate book (stop loss book) in the system until they are triggered.

   (c) Trigger Price: Price at which an order gets triggered from the stop loss book.

   (d) Limit Price: Price of the orders after triggering from stop loss book.

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4. ***Other Conditions***

(a) *Proprietary (PRO) / Client (CLI):* A user can enter orders on his own account or on behalf of clients. By default, the system assumes that the user is entering orders on the trading member's own account. The client account field is an alphanumeric field. It is mandatory to enter the client account number in the field provided in case the user enters orders on behalf of clients. The system will assign a code 'CLI' to such an order. The user cannot specify the trading member code in the client account field.

(b) *Participant Code:* In case of "Pro" order by default, the system displays the trading member ID of the user in the participant field. In case of CLI order if "Participant ID" exist in client master maintenance the same will appear in participant filed, else trading member ID will be reflected. Only a valid participant code can be entered. In case the participant is suspended, a message to this effect is displayed to the user on the order entry screen.

5.3.2 Order Modification

All orders can be modified in the system till the time they do not get fully traded and only during market hours. Once an order is modified, the branch order value limit for the branch gets adjusted automatically. Following is the corporate hierarchy for performing order modification functionality:

(a) A dealer can modify only the orders entered by him.

(b) A branch manager can modify his own orders or orders of any dealer under his branch.

(c) A corporate manager can modify his own orders or orders of all dealers and branch managers of the trading member firm.

The corporate manager/branch manager, however, cannot modify order details such that it exceeds the branch order value limit set for the day. Order modification cannot be performed by/for a trading member who is suspended or de-activated by the Exchange for any reason.

5.3.3 Order Cancellation

Order cancellation functionality can be performed only for orders which have not been fully or partially traded (for the untraded part of partially traded orders only) and only during market hours and in pre-open period.

- ***Single Order Cancellation:*** Single order cancellation can be done during trading hours either by selecting the order from the outstanding order screen or from the function key provided. Order cancellation functionality is available for all book types. But the user is not allowed to cancel auction initiation and competitor orders in auction market.
- ***Quick Order Cancellation:*** Quick Order Cancellation (Cancel All) is an extension of Single Order Cancellation enabling a user to cancel multiple outstanding orders in various trading books subject to the corporate hierarchy. The different filters available for cancelling orders by using quick order cancellation facility are symbol, series, book type, branch, user, PRO/CLI, client account number and buy/sell. Quick order cancellation can be performed by invoking the function key provided and cannot be done from the outstanding orders screen. If the criterion is not found to be correct by a trading member then an error message is displayed and the focus is set on the incorrect field to enable the user to correct it. If the selection criterion is correct then a message appears on the quick order cancellation screen stating the number of buy and sell orders to be cancelled. Quick order cancellation can be done only during market hours.

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- ***Order Cancellation for Disabled Member:*** The Exchange suspends a member from trading due to various reasons. In case a member is suspended from trading by the Exchange, all pending orders in all books of the member are immediately cancelled by the system. A message: "Order Number cancelled due to suspension" is displayed at the message window screen at the trader workstation. Inquiry screens such as MBP, Market Watch and trader specific screens such as Outstanding Orders, Activity Log etc. get updated accordingly.

5.3.4 Order Matching

The buy and sell orders are matched on Book Type, Symbol, Series, Quantity and Price.

Pre-open Matching Priority

The opening price is determined based on the principle of demand supply mechanism. The equilibrium price is the price at which the maximum volume is executable. In case more than one price meets the said criteria, the equilibrium price is the price at which there is minimum unmatched order quantity. In case more than one price has same minimum order unmatched quantity, the equilibrium price is the price closest to the previous day's closing price. In case the previous day's closing price is the mid-value of pair of prices which are closest to it, then the previous day's closing price itself will be taken as the equilibrium price. In case of corporate action, previous day's closing price is adjusted to the closing price or the base price. Both limit and market orders are reckoned for computation of equilibrium price. The equilibrium price determined in pre-open session is considered as open price for the day. In case if only market orders exists both in the buy and sell side, then order is matched at previous days close price or adjusted close price/base price. Previous day's close or adjusted close price/base price is the opening price. In case if no price is discovered in pre-open session, the price of first trade in the normal market is the open price.

Matching Priority

The best sell order is the order with the lowest price and a best buy order is the order with the highest price. The unmatched orders are queued in the system by the following priority:

1. ***By Price:*** A buy order with a higher price gets a higher priority and similarly, a sell order with a lower price gets a higher priority. E.g., consider the following buy orders:

   (a) 100 shares @ ₹ 35 at time 9:30 a.m.

   (b) 500 shares @ ₹ 35.05 at time 9:43 a.m.

   The second order price is greater than the first order price and therefore is the best buy order.

2. ***By Time:*** If there is more than one order at the same price, the order entered earlier gets a higher priority. E.g. consider the following sell orders:

   (a) 200 shares @ ₹ 72.75 at time 9:30 a.m.

   (b) 300 shares @ ₹ 72.75 at time 9:35 a.m.

Both orders have the same price but they were entered in the system at different time. The first order was entered before the second order and therefore is the best sell order.

As and when valid orders are entered or received by the system, they are first numbered, time stamped and then scanned for a potential match. This means that each order has a distinctive

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order number and a unique time stamp on it. If a match is not found, then the orders are stored in the books as per the price/time priority.

An active buy order matches with the best passive sell order if the price of the passive sell order is less than or equal to the price of the active buy order. Similarly, an active sell order matches with the best passive buy order if the price of the passive buy order is greater than or equal to the price of the active sell order.

Regular Lot Matching

The important facts related to regular lot matching are described below:

- If the combined quantity of one or more matching orders on the opposite side of the regular lot book is equal to or more than the quantity of active order, the active order is completely traded.
- If the combined quantity of one or more matching orders on the opposite side of the regular lot book is equal to or less than the quantity of active order, the active order is partially traded.
- If after trading any quantity is left untraded, the order is added to the regular lot book in the price/time priority.
- The orders with the IOC attribute try to match maximum possible quantity after they are entered. Any remaining quantity is cancelled.
- The orders with DQ attribute disclose only a part of the total order quantity to the market.
- An active order with disclosed condition tries to maximise the quantity as possible regardless of the disclosed quantity i.e. a single trade takes place for a quantity more than the disclosed quantity.

If an active order with the disclosed quantity cannot trade its total quantity, it is added to the regular lot book in the price/time priority. The disclosed order quantity is determined as follows:

(a) If the remaining order quantity is less than or equal to the original disclosed quantity, the disclosed order quantity is set as equal to remaining order quantity.

(b) If the remaining order quantity is more than the original disclosed quantity, the disclosed order quantity is set to the original disclosed quantity.

Once an order with the disclosed quantity has become a passive order, it trades only in units of disclosed quantity or less. However, if there is no other competing order with the same price, a single trade of as much quantity as possible takes place between the two orders.

When the entire disclosed order quantity is fully traded the disclosed quantity gets replenished and this continues till the entire order quantity is fully traded. Each time the disclosed quantity is replenished; the order is stamped with the current trading time and added to the regular order book as fresh order.

Stop Loss Matching

All stop loss orders entered into the system are stored in the stop loss book. These orders can contain two prices:

(a) ***Trigger Price:*** It is the price at which the order gets triggered from the stop loss book.

(b) ***Limit Price:*** It is the price for orders after the orders get triggered from the stop loss book. If

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the limit price is not specified, the trigger price is taken as the limit price for the order. The stop loss orders are prioritised in the stop loss book with the most likely order to trigger first and the least likely to trigger last. The priority is same as that of the regular lot book.

The stop loss condition is met under the following circumstances:

(a) ***Sell Order:*** A sell order in the stop loss book gets triggered when the last traded price in the normal market reaches or falls below the trigger price of the order.

(b) ***Buy Order:*** A buy order in the stop loss book gets triggered when the last traded price in the normal market reaches or exceeds the trigger price of the order.

When a stop loss order with IOC condition enters the system, the order is released in the market after it is triggered. Once triggered, the order scans the counter order book for a suitable match to result in a trade or else is cancelled by the system.

RETDEBT Order Matching

The rules for matching the RETDEBT orders are similar to the Regular Lot book except that RETDEBT order matching takes place only for orders in the RETDEBT order book.

Odd Lot Order Matching

Odd Lot matching takes place only for orders in Odd Lot book. There are no partial trades for an Odd Lot order i.e. each match is an exact match where the quantity of the passive order is equal to that of the active order.

Auction Matching

All auction orders are entered into the auction order book. The rules for matching of auctions are similar to that of the regular lot book except for the following points:

(a) Auction order matching takes place at the end of the solicitor period for the auction.

(b) Auction matching takes place only across orders belonging to the same auction.

(c) All auction trades take place at the auction price.

Validation Check

While matching orders, the system performs the validation check, if the participant of any of the orders is 'Suspended'; the trade does not go through.

Self Assessment

Fill in the blanks:

9. Market's orders entered in the pre-open are termed as .....

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

Task Go to website www.infosys.com/Oracle/case-studies/.../oracle-istore-order-management.pdf - and analyze the given case study and interpret it.

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5.4 Trade Management

A trade is an activity in which a buy and a sell order match with each other. Matching of two orders is done automatically by the system. Whenever a trade takes place, the system sends a trade confirmation message to each of the users involved in the trade. The trade confirmation slip gets printed at the trader workstation of the user with a unique trade number. The system also broadcasts a message to the entire market through the ticker window displaying the details of the trade.

This section describes trade-related activities like viewing the trades, trade cancellation, etc. Before the trade is affected, the system performs checks with respect to the following parameters:

(a) The security in which the trade is to be affected is not suspended from operations.

(b) Trading members involved in the potential trade are not suspended from operations.

Once the trade for an order entered is confirmed by the system, a message is sent to the trader workstation. The system generates a Trade Confirmation Slip that is printed on the printer of the trader workstation.

5.4.1 Trade Cancellation

The user can use trade cancellation screen for cancelling trades done during the day. If the user is a corporate manager of a trading member firm, he can request for trade cancellation for the trades of any dealer of the trading members firm and if he is a branch manager of a branch, then he can request for trade cancellation for the trades for any dealer of the branch of the trading member firm.

The user can request for trade cancellation either from the previous trades screen or by using the function key provided in the workstation. The trade cancellation request is sent to the Exchange for approval and message to that effect is displayed in the message window. The counterparty to the trade also receives the message. The counterparty then has to make similar request on the same trading day. Once both the parties to trade send the trade cancellation request, the Exchange either approves or rejects it. The message to that effect is displayed in the message window.

When a request for the trade cancellation is approved by the Exchange, the parties to trade receive a system message confirming the trade cancellation and the trade cancellation slip is printed at their respective trader workstations. If the Exchange rejects the trade cancellation request, the trade cancellation rejection slip is printed at their respective trader workstations. If counter party to the trade does not enter a trade cancellation request the Exchange rejects the trade cancellation request.

Self Assessment

Fill in the blanks:

11. For auction market the price bands of ..... % are applicable.

12. An order with a ..... allows the user to disclose only a portion of the order quantity to the market.

5.5 Auction

Auctions are initiated by the Exchange on behalf of trading members for settlement related reasons. The main reasons are shortages, bad deliveries and objections. There are three types of participants in the auction market:

Notes

(a) ***Initiator:*** The party who initiates the auction process is called an initiator.

(b) ***Competitor:*** The party who enters on the same side as of the initiator is called a competitor.

(c) ***Solicitor:*** The party who enters on the opposite side as of the initiator is called a solicitor.

The trading members can participate in the Exchange initiated auctions by entering orders as a solicitor. E.g. If the Exchange conducts a buy-in auction, the trading members entering sell orders are called solicitors.

When the auction starts, the competitor period for that auction also starts. Competitor period is the period during which competitor order entries are allowed. Competitor orders are the orders which compete with the initiator's order i.e. if the initiator's order is a buy order, then all the buy orders for that auction other than the initiator's order are competitor orders. If the initiator order is a sell order then all the sell orders for that auction other than the initiators order are competitor orders. After the competitor period ends, the solicitor period for that auction starts. Solicitor period is the period during which solicitor order entries are allowed. Solicitor orders are the orders which are opposite to the initiator order i.e. if the initiator order is a buy order, then all the sell orders for that auction are solicitor orders and if the initiator order is a sell order, then all the buy orders for that auction are solicitor orders.

After the solicitor period, order matching takes place. The system calculates trading price for the auction and all possible trades for the auction are generated at the calculated trading price. After this the auction is said to be complete. Competitor period and solicitor period for any auction are set by the Exchange.

5.5.1 Entering Auction Orders

Auction order entry allows the user to enter orders into auctions that are currently running. To view the information about currently running auctions 'Auction Inquiry' screens has to be invoked. Further one can view one's own outstanding orders for any auction by invoking 'Outstanding Order Inquiry' for auction market. All auction orders are valid for the trading day only.

The user can do auction order entry by entering 'AU' in the book type of the order entry screen. Symbol and Series that is currently selected in any of the market information windows (i.e. MW) provides the defaults in the auction order entry screen. If Auction Outstanding Orders is up for an auction that is either in a competitor or solicitor period, then the auction number has to be entered. All fields in the auction order entry screen except auction number and settlement days are same as normal market order entry screen. The screen also displays competitor period and solicitor period.

The defaults that are provided on the auction inquiry screen are symbol, series, auction number, settlement days and quantity (available for auction). The user can edit the default values if required. The fields in the auction order entry screen that has to be entered are PRO/CLI selection, account number (not mandatory), participant and remarks.

Solicitor period for an auction starts as soon as the auction starts. The duration of the solicitor period is set by the Exchange. The system accepts the solicitor orders in any currently running auction only if the solicitor period for that auction is in progress. Currently, the trading members cannot initiate auctions in any security. They can only participate as solicitors in auctions initiated by the Exchange. In Exchange initiated auctions, the competitor period is set to zero and therefore only solicitor period is available.

(i) ***Entering Solicitor Order:*** To enter a solicitor order, auction order entry screen has to be invoked and the auction number or symbol series in AUC No. (auction number) field has to be entered. The AUC No. and symbol series combination is validated and if an error is

Notes

encountered then an appropriate error message is displayed in the message window and the focus is set on the AUC No. When the order details are found to be correct, the system assigns a unique order number to the order and sends an order confirmation message to the trader workstation. If the solicitor period for that auction is over, the order is not accepted. Auction number for each security is displayed in the Auction Inquiry screen.

(ii) ***Validation of Auction Orders:*** Following validation checks are performed, in addition to the routine order entry validation checks, to verify initiator orders:

(a) If the auction market is not open for trading, the user is not allowed to enter an auction order.

(b) If a trading member or a participant is suspended, then no auctions can be entered for the trading member or for the participant.

(c) If the security is not allowed to trade in the auction market or if the security is suspended, the orders for that security are not allowed.

(d) If the quantity entered exceeds Warning Quantity Percentage, the system asks the user for confirmation of the order.

(e) Any order with a price outside the Day Min/Max range is not allowed.

Following validation checks are performed to verify the competitor and the solicitor orders:

(a) If a competitor order is entered, then a check is made if the auction in which order entry is desired is in the competitor period.

(b) If a solicitor order is entered, then a check is made if the auction in which order entry is desired is either in competitor period or solicitor period.

(c) The Trading Member cannot enter order for a security in which initiator order is entered against him.

(d) Auction order entry in auctions which are yet in a pending state or which are cancelled is prohibited.

5.5.2 Auction Order Modification

The user is not allowed to modify any auction orders.

5.5.3 Auction Order Cancellation

The user can cancel any solicitor order placed by him in any auction provided the solicitor period for that auction is not over. The order cancellation procedure is similar to that of normal market. The user can also use quick order cancellation key to cancel his outstanding auction orders.

5.5.4 Auction Order Matching

When the solicitor period for an auction is over; auction order matching starts for that auction. During this process, the system calculates the trading price for the auction based on the initiator order and the orders entered during the competitor and the solicitor period. Currently, for Exchange initiated auctions, the matching takes place at the respective solicitor order prices.

Example: Auction is held in XYZ for 5,000 shares. The closing price of XYZ on that day was ₹ 155. The last traded price of XYZ on that day was ₹ 150. The price of XYZ last Friday was ₹ 151. The previous day's close price of XYZ was ₹ 160. What is the maximum allowable price at

Notes

which the member can put a sell order in the auction for XYZ? (The price band applicable for auction market is +/- 20%)

Maximum price applicable in auction =Previous day's close price × (100+price band)

= ₹ 160 × 1.20 = ₹ 192

Minimum price applicable in auction= Previous day's close price × (100 – price band)

Self Assessment

State whether the following statement is true or false:

13. Auctions are initiated by the Exchange on behalf of trading members for settlement related reasons.

5.6 Limited Physical Market

Pursuant to the directive of SEBI to provide an exit route for small investors holding physical shares in securities mandated for compulsory dematerialised settlement, the Exchange has provided a facility for such trading in physical shares not exceeding 500 shares. This market segment is referred to as 'Limited Physical Market' (small window). The Limited Physical Market was introduced on June 7, 1999.

5.6.1 Salient Features of Limited Physical Market

The salient features of limited physical market are given below:

(a) Trading is conducted in the Odd Lot market (market type 'O') with Book Type 'OL' and series 'BT'.

(b) Order quantities should not exceed 500 shares.

(c) The base price and price bands applicable in the Limited Physical Market are same as those applicable for the corresponding Normal Market on that day.

(d) Trading hours are the same as that of the normal market.

(e) Settlement for all trades is done on a trade-for-trade basis and delivery obligations arise out of each trade.

(f) Orders get matched when both the price and the quantity match in the buy and sell order. Orders with the same price and quantity match on time priority i.e. orders which have come into the system before will get matched first.

(g) Trading Members are required to ensure that shares are duly registered in the name of the investor(s) before entering orders on their behalf on a trade date.

Self Assessment

Fill in the blank:

14. ..... are required to ensure that shares are duly registered in the name of the investor(s) before entering orders on their behalf on a trade date

5.7 Block Trading Session

The Exchange has introduced a separate trading session for the block trades from November 14, 2005. In this session, trading is conducted in the Odd Lot market (market type 'O') with Book

Notes

Type 'OL' and series 'BL'. It is a 35 minute market; i.e. the trading window shall normally remain open from 9:15 hours to 9:50 hours. There is no pre-open and post close in the block trade session. For a block trade, order should be of a minimum quantity of 5,00,000 shares or minimum value of ₹ 5 crore which ever is lower. Orders get matched when both the price and the quantity match for the buy and sell order. Orders with the same price and quantity are matched on time priority i.e. orders which have come into the system before will get matched first. The securities, base price, alert quantity applicable in the block trade session are same as those applicable for the corresponding Normal Market on that day. As per SEBI requirement, member is required to put orders at a price not exceeding (+/–) 1% from the previous close price/ruling market price, as applicable, of normal market. Accordingly, every order price is validated for (+/–) 1% on the ruling LTP in normal market and any order away from this will be rejected by the system. Currently, market order is not allowed for BL series. Order with special terms such as 'Stop Loss', 'Disclosed Quantity' is not available in this session.

Self Assessment

State whether the following statement is true or false:

15. There is a pre-open and post close in the block trade session.

Case Study

Bombay Stock Exchange Improves Efficiency with TNS

Background

The Bombay Stock Exchange (BSE) is one of the oldest stock exchanges in Asia, with over 4800 companies listed. Established in 1875 and fully electronic since 1995, the BSE considers the improvement of electronic trading an essential part of its growth strategy.

Business Challenge

Access to BSE for trading and market data has been limited to participants who have set up their offices within India. Typically these offices were connected over leased lines. The BSE required managed connectivity for both major financial organisations in India and outside the country.

Solution

BSE appointed TNS to provide access to trading functionality and market data information via its fully managed Secure Trading Extranet. TNS' Secure Trading Extranet connects over 1,500 financial community end-points, representing buy and sell-side institutions, market data and software vendors, exchanges and alternative trading venues. It boasts over 120 points of presence and provides services to customers across America, Europe and the Asia Pacific region, with its reach extending to many more.

Question

Discuss the issue.

Source: http://www.tnsi.com/case-studies/trading-case-studies/bombay-stock-exchange

5.8 Summary

- Trading at both the exchanges takes place through an open electronic limit order book, in which order matching is done by the trading computer.

Notes

- There are no market makers or specialists and the entire process is order-driven, which means that market orders placed by investors are automatically matched with the best limit orders. As a result, buyers and sellers remain anonymous.
- The advantage of an order driven market is that it brings more transparency, by displaying all buy and sell orders in the trading system. However, in the absence of market makers, there is no guarantee that orders will be executed.
- Almost all the significant firms of India are listed on both the exchanges.
- NSE enjoys a dominant share in spot trading, with about 70% of the market share, as of 2009, and almost a complete monopoly in derivatives trading, with about a 98% share in this market, also as of 2009.
- Both exchanges compete for the order flow that leads to reduced costs, market efficiency and innovation.
- The presence of arbitrageurs keeps the prices on the two stock exchanges within a very tight range.

5.9 Keywords

Auction Market: In the auction market, auctions are initiated by the exchange on behalf of trading members for settlement related reasons.

Competitor: The party who enters on the same side as of the initiator is called a competitor.

Initiator: The party who initiates the auction process is called an initiator.

NEAT: National Exchange for Automated Trading (NEAT) is a state of-the-art client server based application.

Normal Market: Normal market consists of various book types in which orders are segregated as Regular Lot Orders, Special Term Orders, and Stop Loss Orders depending on the order attributes.

NSE: NSE is the first exchange in the world to use satellite communication technology for trading.

Odd Lot Market: The odd lot market facility is used for the Limited Physical Market and for the Block Trades Session.

Retail Debt Market: The RETDEBT market facility on the NEAT system of capital market segment is used for transactions in Retail Debt Market session.

Solicitor: The party who enters on the opposite side as of the initiator is called a solicitor.

5.10 Review Questions

1. Explain the Screen-based trading system.
2. Describe the NEAT System.
3. Describe the various Market Types.
4. Differentiate between Logging on and Logging off.
5. Discuss the Features of User ID and Password with suitable application.
6. What are the procedural steps of order management?

Notes

7. Securities can be taken as default values from the order entry screen from any of the inquiry screens such as MBP, OO, PT, AL, MI and SQ. What does different symbols stands for?
8. What is Quantity Freeze?
9. Discuss the concept of order modification.
10. Explain how does auctions are initiated.
11. What is block trading session?

Answers: Self Assessment

1.	platform	2.	NSE
3.	price time	4.	best sell
5.	False	6.	True
7.	True	8.	True
9.	ATO	10.	Limited Physical
11.	20	12.	Disclosed Quantity
13.	True	14.	Trading Members
15.	False		

5.11 Further Readings

Books

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Unit 6: Trading Strategies

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Objectives

After studying this unit, you will be able to:

- Explain the objectives of hedging
- Discuss the hedge fund strategies
- Elaborate the forward contracts and future contracts
- Discuss the trading strategies in futures contracts

Introduction

Corporations in which individual investors place their money have exposure to fluctuations in all kinds of financial prices, as a natural by-product of their operations. Financial prices include

Notes

foreign exchange rates, interest rates, commodity prices and equity prices. The effect of changes in these prices on reported earnings can be overwhelming. Often, you will hear companies say in their financial statements that their income was reduced by falling commodity prices or that they enjoyed a windfall gain in profit attributable to the decline of the Canadian dollar.

One reason why companies attempt to hedge these price changes is because they are risks that are peripheral to the central business in which they operate. For example, an investor buys the stock of a pulp-and-paper company in order to gain from its management of a pulp-and-paper business. She does not buy the stock in order to take advantage of a falling Canadian dollar, knowing that the company exports over 75% of its product to overseas markets. This is the insurance argument in favour of hedging. Similarly, companies are expected to take out insurance against their exposure to the effects of theft or fire.

By hedging, in the general sense, we can imagine the company entering into a transaction whose sensitivity to movements in financial prices offsets the sensitivity of their core business to such changes. Hedging is not a simple exercise nor is it a concept that is easy to pin down. Hedging objectives vary widely from firm to firm, even though it appears to be a fairly standard problem, on the face of it. And the spectrum of hedging instruments available to the corporate Treasurer is becoming more complex every day.

Another reason for hedging the exposure of the firm to its financial price risk is to improve or maintain the competitiveness of the firm. Companies do not exist in isolation. They compete with other domestic companies in their sector and with companies located in other countries that produce similar goods for sale in the global marketplace. Again, a pulp-and-paper company based in Canada has competitors located across the country and in any other country with significant pulp-and-paper industries, such as the Scandinavian countries.

6.1 Objectives of Hedging

Straightaway, we can see that there are a number of issues that present themselves.

- First, what is the hedging objective of the firm?

  Some of the best-articulated hedging programmes in the corporate world will choose the reduction in the variability of corporate income as an appropriate target. This is consistent with the notion that an investor purchases the stock of the company in order to take advantage of their core business expertise.

> *Notes* That a hedge is a financial instrument whose sensitivity to a particular financial price offsets the sensitivity of the firm's core business to that price.

  Other companies just believe that engaging in a forward outright transaction to hedge each of their cross-border cash flows in foreign exchange is sufficient to deem themselves hedged. Yet, they are exposing their companies to untold potential opportunity losses. And this could impact their relative performance pejoratively.

- Second, what is the firm's exposure to financial price risk?

  Financial institutions whose core business is the management and acceptance of financial price risk have whole departments devoted to the independent measurement and quantification of their exposures. It is no less critical for a company with billions of dollars of internationally driven revenue to do so.

Notes

Notes It is important to measure and to have on a daily basis some notion of the firm's potential liability from financial price risk.

There are three types of risk for every particular financial price to which the firm is exposed.

Transactional risks reflect the pejorative impact of fluctuations in financial prices on the cash flows that come from purchases or sales. This is the kind of risk we described in our example of the pulp-and-paper company concerned about their US$10 million contract. Or, we could describe the funding problem of the company as a transactional risk. How do they borrow money? How do they hedge the value of a loan they have taken once it is on the books?

Translation risks describe the changes in the value of a foreign asset due to changes in financial prices, such as the foreign exchange rate.

Economic exposure refers to the impact of fluctuations in financial prices on the core business of the firm. If developing market economies devalue sharply while retaining their high technology manufacturing infrastructure, what effect will this have on an Ottawa-based chip manufacturer that only has sales in Canada? If it means that these countries will flood the market with cheap chips in a desperate effort to obtain hard currency, it could mean that the domestic manufacturer is in serious jeopardy.

- Third, what are the various hedging instruments available to the corporate Treasurer and how do they behave in different pricing environments?

  When it is best to use which instrument is a question the corporate Treasurer must answer. The difference between a mediocre corporate Treasury and an excellent one is their ability to operate within the context of their shareholder-delineated limits and choose the optimal hedging structure for a particular exposure and economic environment. Not every structure will work well in every environment. The corporate Treasury should be able to tailor the exposure using derivatives so that it fits the preferences and the view of the senior management and the board of directors.

6.2 Importance of Hedging

The single-most important point to take away from this material is that financial risk management is critical to the survival of any non-financial corporation. Investors who have real money at risk must understand the exposures facing the firms in which they invest, they must know the extent of risk management at these companies and they must be able to distinguish between good risk management programmes and bad ones. Without this knowledge, they may be in for some ugly surprises.

Did u know? It may appear that companies in which individual investors place money do not have exposures to financial prices.

6.3 Risk Management Strategies

Many corporate executives are faced with the challenge of managing the risks associated with low cost basis and restricted-stock holdings (i.e., concentrated equity positions). There are many strategies available, each with unique characteristics and requirements. In general, these strategies

Notes

provide holders of concentrated equity positions the ability to protect against a decrease in the value of the stock, generate liquidity, diversify the exposure, and potentially defer capital gains taxes.

Management strategies include the following:

- Risk Avoidance is just that, avoiding the risk associated with a specific task, activity or project. Often, following the review of a contract, it is determined that a project is just too risky. The client may decide not to bid the work at all, or remove that element of the work from their bid, sometimes using an alternate deduct to delineate the exclusion. Risk avoidance is strictly a business decision, and sometimes a very good strategy if construction documents are unclear, ambiguous or incomplete.
- Risk Abatement is the process of combining loss prevention or loss control to minimize a risk. This risk management strategy serves to reduce the loss potential and decrease the frequency or severity of the loss. Risk abatement is preferably used in conjunction with other risk management strategies, since using this risk management method alone will not totally eliminate the risk.
- Risk Retention is a good strategy only when it is impossible to transfer the risk. Or, based on an evaluation of the economic loss exposure, it is determined that the diminutive value placed on the risk can be safely absorbed. Another consideration in retaining a risk is when the probability of loss is so high that to transfer the risk, it would cost almost as much as the cost of the worst loss that could ever occur, i.e., if there is a high probability of loss, it may be best to retain the risk in lieu of transferring it.
- Risk Transfer is the shifting of the risk burden from one party to another. This can be done in several ways, but is usually done through conventional insurance as a risk transfer mechanism, and through the use of contract indemnification provisions.
- Risk Allocation is the sharing of the risk burden with other parties. This is usually based on a business decision when a client realizes that the cost of doing a project is too large and needs to spread the economic risk with another firm. Also, when a client lacks a specific competency that is a requirement of the contract, e.g., design capability for a design-build project. A typical example of using a risk allocation strategy is in the formation of a joint venture.

Regardless of how the portfolio management and risk management activity is characterized, e.g., investing, trading, speculating, or hedging; regardless of the markets and instruments traded; and, regardless of the strategies and tactics employed; one requirement is common to all applications - the need to understand and manage the risk inherent in the underlying activity. All analytical and decision making and implementation processes are oriented to making sure that risk can be prudently managed before focusing on the potential reward.

Self Assessment

Fill in the blanks:

1. By hedging, in the general sense, we can imagine the company entering into a transaction whose ..... to movements in financial prices offsets the sensitivity of their core business to such changes.
2. Risk ..... is the sharing of the risk burden with other parties.
3. Risk ..... is just that, avoiding the risk associated with a specific task, activity or project.
4. Risk ..... is a good strategy only when it is impossible to transfer the risk.
5. Risk ..... is the shifting of the risk burden from one party to another.

Notes

Caselet

The Perfect Hedge: JP Morgan

At its simplest, to hedge is to offset risk. While the term is most often associated with investments, we all hedge all the time. We buy health insurance to hedge against the costs associated with an accident or illness. Farmers settle on a price for their crops before the planting season to hedge against big fluctuations in supply or demand. Airlines lock in future fuel costs to hedge against volatility in the price of oil. I will be wearing a helmet when I go mountain biking this weekend to hedge against serious injury. You get the point. On Wall Street, a hedge can take all sorts of complicated forms and firms are always on the lookout for the perfect hedge – one that reduces risk to zero.

For JP Morgan, the quest for the perfect hedge cost the firm $2 billion. If hedging is meant to offset risk, then how could that happen?

Reports indicate that JP Morgan was betting on changes in the creditworthiness of US investment grade corporations (basically, betting on the US economy). To offset their risk, the firm bought credit default swaps. These financial instruments are a form of insurance against exposure in the fixed income market. Similar to health insurance, when you buy a swap, you make premium payments to the seller in exchange for protection, in this case protection against a default on the US corporate loans. That sounds like a good hedge, right? It usually is.

Where things got complicated is that JP Morgan also began selling related credit default swaps. By selling, the bet changes from likely default to likely payment. The seller collects a premium (he acts as the insurance company this time) for each swap making a tidy profit in the process. JP Morgan's "London Whale" got his nickname because he sold so many of these swaps that he basically drove down the cost of premiums for buyers.

So now JP Morgan owned the underlying bonds, owned insurance on some of those bonds and sold insurance on a lot more. When the sovereign debt fears flared up again in April, the firm was caught with positions that were losing value on both sides. To make matters worse, when they started to unwind the worst of them (the swaps the London Whale had sold), other investors caught wind of it and used that knowledge to make it very difficult for them, thus multiplying JP Morgan's losses.

On the conference call, CEO Jamie Dimon said, "The portfolio has proven to be riskier, more volatile and less effective an economic hedge than we thought." Not the perfect hedge after all.

Source: http://exchanges.nyx.com/allison-orourke/perfect-hedge-jp-morgan-case-study

6.4 Hedge Fund Strategies

The predictability of future results shows a strong correlation with the volatility of each strategy. Future performance of strategies with high volatility is far less predictable than future performance from strategies experiencing low or moderate volatility.

- ***Aggressive Growth:*** Hedge fund investors invest in equities expected to experience acceleration in growth of earnings per share. These are generally high P/E ratios, low or no dividends; often smaller and micro cap stocks, which are expected to experience rapid growth. These include sector specialist funds such as technology, banking, or biotechnology. Hedges by shorting equities where earnings disappointment is expected or by shorting stock indexes tend to be "long-biased." Expected Volatility: High.

Notes

- ***Distressed Securities:*** Investors buy equity, debt, or trade claims at deep discounts of companies in or facing bankruptcy or reorganization. Profits from the market's lack of understanding of the true value of the deeply discounted securities and because the majority of institutional investors cannot own below investment grade securities. (This selling pressure creates the deep discount.) Results generally not dependent on the direction of the markets. Expected Volatility: Low – Moderate.
- ***Emerging Markets:*** Hedge funders invest in equity or debt of emerging (less mature) markets, which tend to have higher inflation and volatile growth. Short selling is not permitted in many emerging markets, and, therefore, effective hedging is often not available, although bad debt can be partially hedged via Indian Treasury futures and currency markets. Expected Volatility: Very High.
- ***Fund of Funds:*** Mixes and matches hedge funds and other pooled investment vehicles. This blending of different strategies and asset classes aims to provide a more stable long-term investment return than any of the individual funds. The mix of underlying strategies and funds can control returns, risk and volatility. Capital preservation is generally an important consideration. Volatility depends on the mix and ratio of strategies employed. Expected Volatility: Low – Moderate.
- ***Income:*** Invests with primary focus on yield or current income rather than solely on capital gains. May utilize leverage to buy bonds and sometimes fixed income derivatives in order to profit from principal appreciation and interest income. Expected Volatility: Low.
- ***Macro:*** Aims to profit from changes in global economies typically brought about by shifts in government policy, which impact interest rates, in turn affecting currency, stock, and bond markets. Participates in all major markets equities, bonds, currencies and commodities — though not always at the same time. Uses leverage and derivatives to accentuate the impact of market moves. Utilizes hedging, but leveraged directional bets tend to make the largest impact on performance. Expected Volatility: Very High.
- ***Market Neutral – Arbitrage:*** Attempts to hedge out most market risk by taking offsetting positions, often in different securities of the same issuer. Investors may also use futures to hedge out interest rate risk. Focuses on obtaining returns with low or no correlation to both the equity and bond markets. These relative value strategies include fixed income arbitrage, mortgage backed securities, capital structure arbitrage, and closed-end fund arbitrage. Expected Volatility: Low.
- ***Market Neutral – Securities Hedging:*** Invests equally in long and short equity portfolios generally in the same sectors of the market. Market risk is greatly reduced, but effective stock analysis and stock picking is essential to obtaining meaningful results. Leverage may be used to enhance returns. Usually low or no correlation to the market. Sometimes uses market index futures to hedge out systematic (market) risk. Relative benchmark index usually T-bills. Expected Volatility: Low.
- ***Market Timing:*** Allocates assets among different asset classes depending on the manager's view of the economic or market outlook. Portfolio emphasis may swing widely between asset classes. Unpredictability of market movements and the difficulty of timing entry and exit from markets add to the volatility of this strategy. Expected Volatility: High.
- ***Opportunistic:*** Investment theme changes from strategy to strategy as opportunities arise to profit from events such as IPO's, sudden price changes often caused by an interim earnings disappointment, hostile bids, and other event-driven opportunities. Investors may utilize several of these investing styles at a given time and is not restricted to any particular investment approach or asset class. Expected Volatility: Variable.

Notes

- ***Multi-strategy:*** Investment approach is diversified by employing various strategies simultaneously to realize short and long-term gains. Other strategies may include systems trading such as trend following and various diversified technical strategies. This style of investing allows the manager to overweight or underweight different strategies to best capitalize on current investment opportunities. Expected Volatility: Variable.
- ***Short Selling:*** Sells securities short in anticipation of being able to re-buy them at a future date at a lower price due to the manager's assessment of the overvaluation of the securities, or the market, or in anticipation of earnings disappointments often due to accounting irregularities, new competition, change of management, etc. Often used as a hedge to offset long-only portfolios and by those who feel the market is approaching a bearish cycle. High risk. Expected Volatility: Very High.
- ***Special Situations:*** Invests in event-driven situations such as mergers, hostile takeovers, reorganizations, or leveraged buy-outs. Investors May involve simultaneous purchase of stock in companies being acquired, and the sale of stock in its acquirer, hoping to profit from the spread between the current market price and the ultimate purchase price of the company. May also utilize derivatives to leverage returns and to hedge out interest rate and/or market risk. Results generally are not dependent on direction of market. Expected Volatility: Moderate.
- ***Value:*** Invests in securities perceived to be selling at deep discounts to their intrinsic or potential worth. Such securities may be out of favour or under-followed by analysts. Long-term holding, patience, and strong discipline are often required until the market recognizes the ultimate value. Expected Volatility: Low – Moderate.

Self Assessment

State whether the following statements are true or false:

6. Hedge fund investors invest in equities expected to experience acceleration in growth of earnings per share.
7. Profits from the market's lack of understanding of the true value of the deeply discounted securities.
8. Sells securities short in anticipation of being able to re-buy them at a future date at a lower price due to the manager's assessment of the overvaluation of the securities, or the market, or in anticipation of earnings disappointments often due to accounting irregularities, new competition, change of management, etc.
9. Investment approach is diversified by employing various strategies simultaneously to realize short and long-term gains.
10. Short selling is surely permitted in many emerging markets, and, therefore, effective hedging is often not available, although bad debt can be partially hedged via Indian Treasury futures and currency markets. Expected Volatility: Very High.

6.5 Forward Contract

A forward contract is an agreement made today between a buyer and seller to exchange the commodity or instrument for cash at a predetermined future date at a price agreed upon today. The agreed upon price is called the 'forward price'. With a forward market the transfer of ownership occurs on the spot, but delivery of the commodity or instrument does not occur until some future date. In a forward contract, two parties agree to do a trade at some future date, at a stated price and quantity. No money changes hands at the time the deal is signed. For example, a wheat farmer may wish to contract to sell their harvest at a future date to eliminate the risk of

Notes

a change in prices by that date. Such transaction would take place through a forward market. Forward contracts are not traded on an exchange; they are said to trade over the counter (OTC). The quantities of the underlying asset and terms of contract are fully negotiable.

Caution The secondary market does not exist for the forward contracts and faces the problems of liquidity and negotiability.

6.5.1 Problems in Forward Contracting

The forward contracts are affected by the problems like:

(a) Lack of centralisation of trading,

(b) Illiquidity, and

(c) Counter party risk.

6.6 Futures Contract

The futures contract is traded on a futures exchange as a standardised contract, subject to the rules and regulations of the exchange. It is the standardisation of the futures contract that facilitates the secondary market trading. The futures contract relates to a given quantity of the underlying asset and only whole contracts can be traded and trading of fractional contracts is not allowed in futures contracting.

The terms of the futures contracts are not negotiable. A futures contract is a financial security, issued by an organised exchange to buy or sell a commodity, security or currency at a predetermined future date at a price agreed upon today. The agreed upon price is called the 'futures price'.

6.6.1 Types of Futures Contract

Futures contracts may be classified into two categories:

1. ***Commodity Futures:*** Where the underlying is a commodity or physical asset such as wheat, cotton, butter, eggs etc. Such contracts began trading on Chicago Board of Trade (CBOT) in 1860s. In India too, futures on soyabean, black pepper and spices have been trading for long.
2. ***Financial Futures:*** Where the underlying is a financial asset such as foreign exchange, interest rates, shares, Treasury bills or stock index.

6.6.2 Standardised Items in Futures

The standardised items in any futures contract are:

(a) Quantity of the underlying

(b) Quality of the underlying (not required in financial futures)

(c) The date and month of delivery

(d) The units of price quotation (not the price itself) and minimum change in price (tick-size)

(e) Location of settlement

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6.6.3 Important Features of Futures Contract

The important features of futures contract are given below:

- ***Standardisation:*** The important feature of futures contract is the standardisation of contract. Each futures contract is for a standard specified quantity, grade, coupon rate, maturity, etc. The standardisation of contracts fetches the potential buyers and sellers and increases the marketability and liquidity of the contracts.
- ***Clearing house:*** An organisation called 'futures exchange' will act as a clearinghouse. In futures contract, the obligation of the buyer and the seller is not to each other but to the clearing house in fulfilling the contract, which ensure the elimination of the default risk on any transaction.
- ***Time Spreads:*** There is a relationship between the spot price and the futures price of contract. The relationship also exists between prices of futures contracts, which are on the same commodity or instrument but which have different expiry dates. The difference between the prices of two contracts is known as the 'time spread', which is the basis of futures market.
- ***Margins:*** Since the clearing house undertakes the default risk, to protect itself from this risk, the clearing house requires the participants to keep margin money, normally ranging from 5% to 10% of the face value of the contract.

6.6.4 Uses of Forward and Futures Contracting

The uses of forward and futures contracting are as follows:

1. ***Hedging:*** The classic hedging application would be that of a wheat farmer forward/ futures selling his harvest at a known price in order to eliminate price risk. Conversely, a bread factory may want to buy wheat forward/futures in order to assist production planning without the risk of price fluctuations.
2. ***Price discovery:*** Price discovery is the use of forward/futures prices to predict spot price that will prevail in the future. These predictions are useful for production decisions involving the various commodities.
3. ***Speculation:*** If a speculator has information or analysis which forecasts an upturn in a price, then he can go long on the forward/futures market instead of the cash market, wait for the price rise, and then take a reversing transaction. The use of forward/futures market here gives leverage to the speculator.

6.6.5 Forward Contract vs. Future Contract

Forward contracts are private bilateral contracts and have well-established commercial usage. Future contracts are standardised tradable contracts fixed in terms of size, contract date and all other features. The differences between forward and futures contracts are given below:

Table 6.1: Differences between Forward and Future Contracts

Forward contracts	Future contracts
1. The contract price is not publicly disclosed and hence not transparent.	1. The contract price is transparent.
2. The contract is exposed to default risk by counterparty.	2. The contract has effective safeguards against defaults in the form of clearing corporation guarantees for trades and daily mark to market adjustments to the accounts of trading members based on daily price change.

Contd...

Notes

3. Each contract is unique in terms of size, expiration date and asset type/quality.	3. The contracts are standardised in terms of size, expiration date and all other features.
4. The contract is exposed to the problem of liquidity.	4. There is no liquidity problem in the contract.
5. Settlement of the contract is done by delivery of the asset on the expiration date.	5. Settlement of the contract is done on cash basis.

6.6.6 Participants in Futures Market

The major players in the futures market are Hedgers, Speculators and Arbitrageurs.

- ***Hedgers:*** Hedgers wish to eliminate or reduce the price risk to which they are already exposed. The hedging function solely focuses on the role of transferring the risk of price changes to other holders in the futures markets.
- ***Speculators:*** Speculators are that class of investors who willingly take price risks to profit from price changes in the underlying.
- ***Arbitrageurs:*** Arbitrageurs profit from price differential existing in two markets by simultaneously operating in two different markets.

Self Assessment

Fill in the blanks:

11. ..... wish to eliminate or reduce the price risk to which they are already exposed.
12. ..... are that class of investors who willingly take price risks to profit from price changes in the underlying.

6.7 Trading Strategies in Futures Contracts

- Buy a future to agree to take delivery of a commodity. This will protect against a rise in price in the spot market as it produces a gain if spot prices rise. Buying a future is said to be going long.
- Sell a future to agree to make delivery of a commodity. This will protect against a fall in price in the spot market as it produces a gain if spot prices fall. Selling a future is said to be going short.

A futures contract is a contract for delivery of a standard package of a standard commodity or financial instrument at a specific date and place in the future but at a price that is agreed when the contract is taken out. Certain futures contracts, such as on stocks or currency, settled in cash on the price differentials, because clearly, delivery of this particular commodity would be difficult.

The futures price is determined as follows:

Futures Price = Spot Price + Costs of Carrying

The spot price is the current price of a commodity. The costs of carrying of a commodity will be the aggregate of the following:

(a) Storage

(b) Insurance

(c) Transport costs involved in delivery of commodity at an agreed place.

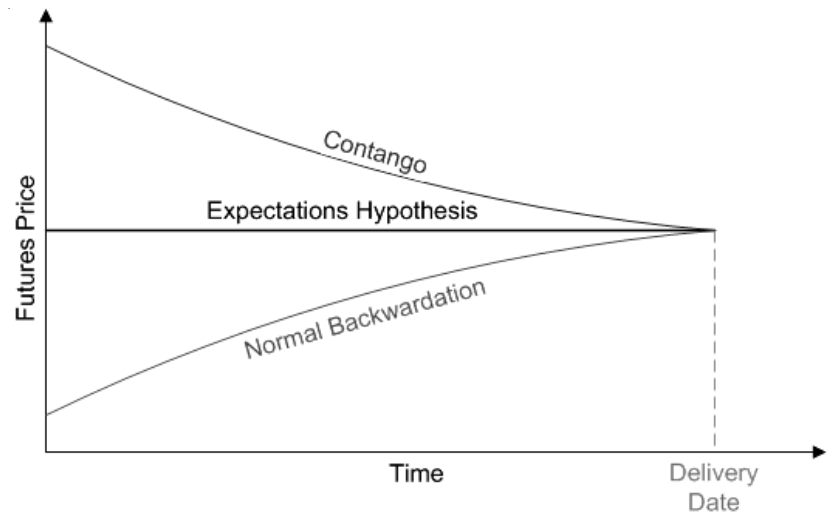
Notes

(d) Finance costs i.e., interest forgone on funds used for purchase of the commodity.

Basis = Futures – Spot Price

Although the spot price and futures price generally move in line with each other, the basis is not constant. Generally, the basis will decrease with time. And on expiry, the basis is zero and futures price equals spot price. If the futures price is greater than the spot it is called contango. Under normal market conditions futures contracts are priced above the spot price. This is known as the contango market. In this case, the futures price tends to fall over time towards the spot, equalling the spot price on delivery day. If the spot price is greater than the futures price it is called 'backwardation'. Then the futures price tends to rise over time to equal the spot price on the delivery day. So in either case, the basis is zero at delivery. This may happen when the cost of carry is negative, or when the underlying asset is in short supply in the cash market, but there is an expectation of increased supply in future, for example agricultural products. The direction of the change in price tends to hold for cycles of contracts with different delivery dates. If the spot price is expected to be stable over the life of the contract, a contract with a positive basis will lead to a continued positive basis although this will be lower in nearby delivery dates than in far-off delivery dates. This is a normal contango. Conversely, normal backwardation is the result of a negative basis where nearer maturing contracts has higher futures prices than far-off maturing contract.

Figure 6.1: Futures Contracts – Contango and Backwardation



- ***Simple Pay-off Positions in Futures:*** The buyer of a futures contract is said to 'go long' the future, whereas the seller is said to 'go short.' With a long position, the value of the position rises as the asset price rises and falls as the asset price falls. With a short position, a loss ensues if the asset price rises but profits are generated if the asset price falls.
- ***Buyer's Pay-off:*** The buyer of futures contract has an obligation to purchase the underlying instrument at a price when the spot price is above the contract price. The buyer will buy the instrument for the price 'C' and can sell the instrument for higher spot price thus making a profit. When the contract price is above spot price, a loss is made by the buyer of the contract.
- ***Seller's Pay-off:*** The seller of the contract makes a profit when the contract price is above the spot price. The seller will purchase the instrument at the spot price and will sell at the contract price. The seller makes a loss when the spot price is above the contract price.

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Figure 6.2: Pay off in Long and Short Futures Position

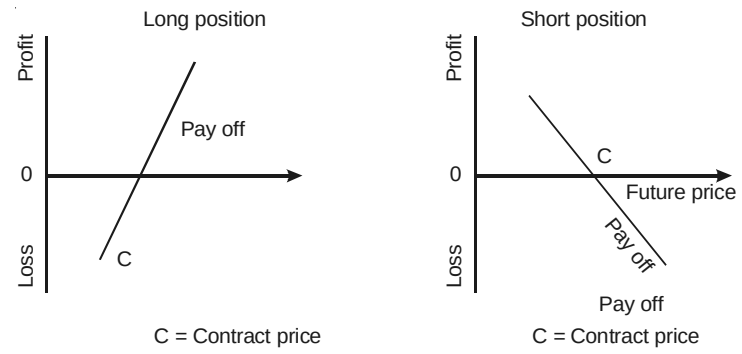


Illustration: Suppose a trader has bagged an order for which he has to supply 2,000 tonnes of aluminium sheet to the buyer within next two months.

After obtaining the order the trader is observing a rise of price of aluminium sheet in the open market and, if such a rise continues, the profit margin of the trader may get shrunk; he may even land on a huge loss just because of rise in the procurement price of the aluminium sheet. But if the trader under the circumstances purchases aluminium sheet futures, then any loss for the rise of price of aluminium to be bought by the trader for the supply order could be then off-set against profit on the future contract. However, if there is a fall of price, extra profit on fall of price of aluminium sheet can also be offset against cost or loss of futures contract. So hedging technique is the equivalent of insurance facility against market risk where price is always volatile.

6.7.1 Daily Settlement/Marking to Market

Futures Daily Settlement, or Marking to Market, is a complicated process that takes place at the end of each trading day or trading period. This process of daily settlement determines the end of day or period price of the asset covered by the futures contract and the "settle" the profits or losses between the long and short. Yes, it is this "settling of differences" between the long and the short that gives the process its name.

In futures contracts, a small payment known as 'initial margin' is required to be deposited with the organised futures exchange. Due to fluctuations in the price of underlying asset, the balance in the margin account may fall below specified minimum level or even become negative at the end of each trading session. All outstanding contracts are appraised at the settlement price of that session, which is called 'marking to market.' This means adjusting the margin accounts of both the parties. A member incurring cost should make payment of profit to the counter party and the value of future contracts is set to zero at the end of each trading session. The daily settlement payments are known as 'variation margin' payments.

6.7.2 Closing Out of Futures Contract

A long position in futures can be closed out by selling futures while a short position in futures can be closed out by buying futures on the exchange. Once position is closed out, only the net difference needs to be settled in cash, without any delivery of underlying. Most contracts are not held to expiry but closed out before that. If held until expiry, some are settled for cash and others for physical delivery.

Notes

6.7.3 Simple Strategies in Futures Market

The following simple strategies are popular in the futures market:

Commodities Futures Market

- Buy a future to agree to take delivery of a commodity to protect against a rise in price in the spot market as it produces a gain if spot prices rise. Buying a future is said to be going long.
- Sell a future to agree to make delivery of a commodity to protect against a fall in price in the spot market as it produces a gain if spot prices fall. Selling a future is said to be going short.

Interest Rate Future

- Selling short an interest rate futures contract protects against a rise in interest rates.
- Purchasing long an interest rate futures contract protects against a fall in interest rates. Future Rate Agreements (FRAs).
- Selling short on FRA protects against a fall in interest rates.
- Purchasing long on FRA Protects against a rise in interest rates.

Currency Futures

- Buying long a currency future protects against a rise in currency value.
- Selling short a currency future protects against a fall in currency value.

Margining in Futures Market

Whole system dwells on margins:

- Daily Margins
- Initial Margins
- Special Margins
- Compulsory collection of margins from clients including institutions.
- Collection of margins on the Portfolio basis not allowed by L. C. Gupta committee.

Daily Margins

- Daily margins are collected to cover the losses that have already taken place on open positions.
- Price for daily settlement - Closing price of futures index.
- Price for final settlement - Closing price of cash index.
- For daily margins, two legs of spread positions would be treated independently.
- Daily margins should be received by CC/CH and/or exchange from its members before the market opens for the trading on the very next day.
- Daily margins would be paid only in cash.

Initial Margins

- Margins to cover the potential losses for one day.
- To be collected on the basis of value at risk at 99% of the days.
- Different initial margins on:
    - ❖ Naked Positions

      Short positions 100 [exp ($3s_t$) – 1]

Notes

Long positions 100 [1 – exp ($3s_t$)]

$(s_t)^2 = l(s_{t-1})2 + (1 - l)(r_t^2)$

Where,

s_t is today's volatility estimates.

s_{t-1} is the volatility estimates on the previous trading day.

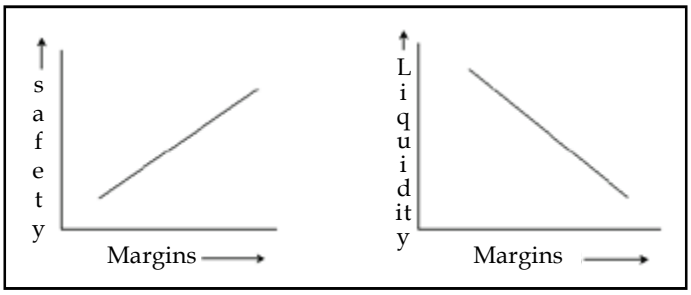
I is decay factor which determines how rapidly volatility estimates change and is taken as 0.94 by Prof. J. R. Verma committee Report, 1988.

r_t is the return on the trading day [$\log(I_t/I_{t-1})$]

Because volatility estimate s_t changes everyday, Initial margin on open position will change every day (for first 6 months of futures trading, minimum initial margin on naked positions shall be 5%)

- Spread Positions
  - Flat rate of 0.5% per month of spread on the far month contract.
  - Minimum margin of 1% and maximum margin of 3% on spread positions.
  - A calendar spread would be treated as open position in the far month contract as the near month contract approaches maturity.
  - Over the last five days of trading of the near month contract, the following percentages of the spread shall be treated as naked position in the far month contract:
    - 100% on the day of expiry
    - 80% one day before the expiry
    - 60% two days before the expiry
    - 40% three days before the expiry
    - 20% four days before the expiry

    Margins on the calendar spread are to be reviewed after six months of futures trading.
  - Striking an intelligent balance between safety and liquidity while determining margins is a million dollar point.



Task Prepare a short story on trading strategies on future contracts.

Self Assessment

Notes

State whether the following statements are true or false:

13. A futures contract is a contract for delivery of a standard package of a standard commodity or financial instrument at a specific date and place in the future but at a price that is agreed when the contract is taken out.

14. The direction of the change in price tends to hold for cycles of contracts with different delivery dates.

15. A long position in futures can be opened out by selling futures while a short position in futures can be closed out by buying futures on the exchange.

Case Study

Natural Gas Producer is Well Hedged, Refocused on Core Business

Client

A privately held, natural gas producer.

The Challenge

For over a decade, our Client had been hedging their natural gas production with a leading natural gas marketing company and, historically, was very satisfied with the relationship as well as the hedging instruments and prices offered by the marketing company. However, when faced with a challenging economic and lending environment, the marketing company was forced to reduce our Client's credit line as the marketing company's own credit lines had been drastically reduced by their lenders. Making the matter worse, our Client's existing hedge positions were set to expire in the coming months. The economic environment had led many banks and trading companies to cease accepting new hedging customers and our Client had no prospects for an alternative hedge provider(s).

The Solution

Within days of the first conversation with our Client, we assessed their hedging goals and objectives, quantified their hedging requirements and facilitated introductions to over a dozen potential counterparties, none of which were previously known to our Client. Within 60 days of being contacted by our Client, we were able to assist them in forging a relationship and line of credit with a well capitalized counterparty that also happens to offer unparalleled customer service. The new relationship and line of credit have led to the establishment of a revamped hedging program for our Client.

The Results

Working with Mercatus Energy Advisors and the new counterparty, our Client once again has a solid natural gas hedging program in place. Knowing that their revenues and cash flow are once again predictable, our Client has been able to return their focus to their core business of drilling for and producing natural gas.

Furthermore, since engaging Mercatus Energy Advisors, our Client's hedging program is significantly outperforming their internal benchmarks, and the company is well positioned to produce even stronger results in the future.

Contd...

Notes

Question:

Critically analyse the case study

Source: http://www.mercatusenergy.com/energy-hedging-case-studies/

6.8 Summary

- Financial prices include foreign exchange rates, interest rates, commodity prices and equity prices. The effect of changes in these prices on reported earnings can be overwhelming.
- Companies attempt to hedge these price changes because they are risks that are peripheral to the central business in which they operate.
- By hedging, in the general sense, we can imagine the company entering into a transaction whose sensitivity to movements in financial prices offsets the sensitivity of their core business to such changes.
- Hedging objectives vary widely from firm to firm, even though it appears to be a fairly standard problem, on the face of it. And the spectrum of hedging instruments available to the corporate Treasurer is becoming more complex every day.
- The futures contracts overcome the problems faced by forward contracts, since futures contracts are entered into under the supervision and control of an organised exchange.
- The futures contracts are entered into for a wide variety of instruments like agricultural commodities, minerals, industrial raw materials, financial instruments etc.
- The forward and futures contracts are entered into for meeting the objects like hedging the risk from price fluctuations, making profit from speculative and arbitrage opportunities, price discovery of the future price.
- The futures price is the market's expectation of what the spot price will be on the delivery date of the particular contract. The futures price comes close to spot price, when the delivery date becomes due.

6.9 Keywords

Arbitrageurs: Arbitrageurs profit from price differential existing in two markets by simultaneously operating in two different markets.

Economic Exposure: It refers to the impact of fluctuations in financial prices on the core business of the firm.

Future Contract: A futures contract is a contract for delivery of a standard package of a standard commodity or financial instrument at a specific date and place in the future but at a price that is agreed when the contract is taken out.

Future Market: Futures Daily Settlement, or Marking to Market, is a complicated process that takes place at the end of each trading day or trading period.

Hedging: A risk management strategy used in limiting or offsetting probability of loss from fluctuations in the prices of commodities, currencies, or securities.

Speculators: Speculators are that class of investors who willingly take price risks to profit from price changes in the underlying.

Transactional Risks: It reflects the pejorative impact of fluctuations in financial prices on the cash flows that come from purchases or sales.

Translation Risks: It describes the changes in the value of a foreign asset due to changes in financial prices, such as the foreign exchange rate.

Notes

6.10 Review questions

1. Define Futures.
2. Define Forward Contracts.
3. Discuss the relationship between 'spot rate' and 'forward rate.'
4. Write short note on "forward as hedge instrument."
5. Distinguish between 'forward contract' and 'futures contract.'
6. Enumerate the basic difference between a forward contract and a futures contract.
7. Write short note on 'futures and options.'
8. Who are the major players in the futures market?

Answers: Self Assessment

1.	Sensitivity	2.	Allocation
3.	Avoidance	4.	Retention
5.	Transfer	6.	True
7.	True	8.	True
9.	True	10.	False
11.	Hedgers	12.	Speculators
13.	True	14.	True
15.	False		

6.11 Further Readings

Books

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finance.martinsewell.com/trading-systems/Sand02.pdf

ftp://server.71.lt/PDF/forex%20trading%20system%20-% 20encyclopedia% 20of%20trading%20strategies.pdf

http://www.cmegroup.com/education/25_proven_strategies/CME-113_21brochure_SIDE_SR.pdf

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Unit 7: Fundamental Analysis 1: Economic Analysis

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Objectives

After studying this unit, you will be able to:

- Explain the concept of fundamental analysis
- Discuss the economy - industry - company Analysis: A framework
- Elaborate the economic and industry analysis

Introduction

Investment decisions are a part of our economic life. Everybody makes such decisions in different contexts at different times. Some are able to reap more profits through them; while others simply lose their money. Attempts should, therefore, be made to understand and know the way sound investments decision can be made in order to improve the change of making profit through them. Thus, investment decision-making is an important area probing further.

Unfortunately, for long, investment decision-making was regarded only as an act. As an art it is personal subjective, it was difficult to provide a general framework with in one could operate. Only, recently it was considered as science with the result that a body of literature has been developed that help us to understand the way investment decisions can be attempted. Recognizing its art content, this body of literature works on the thinking that a general system framework can be suggested for those involved in investment decisions, who can then modify it according to their requirements. It has, therefore, been recognized that investment

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decision-making is both an art as well as a science. This is indeed an on-going process in which a decision-maker attempts to update himself regarding the characteristics of returns of securities. These characteristics keep on changing and investors go on attempting to understand their impact on their decisions. The investment decision-maker takes them into account in order to decide which securities should be bought or held or sold by him. A very simple decision rule is applicable here: buy a security that has highest bought, held or sold security volume and the above required per unit of risk or lowest risk per unit or return. And, sell the security, which does not satisfy the above required.

The above decision rule to buy/sell securities is highly simple, but it is very difficult to apply both risk and return fashion in actual practice. This is because there are a large number of factors, which affect both risk and return in the real world. Thus, a security that had the highest return per unit of risk at one point of time and was considered to be a good buy might turn into a less attractive proposition and could be considered later on as a possible candidate for disinvestments. Such a situation might arise due to change in the management concerned company or changes in government policy concerning the economy, making it less attractive.

Investment decision-making being continuous in nature should be attempted systematically. Broadly approaches are suggested in the literature. These are: fundamental analysis and technical analysis. In this approach, the investor attempts to look at fundamental factors that affect risk return characteristic of the security. While in the second approach, the investor tries to identify the price trends that reflect these characteristics. Technical analysis concentrates on demand and supply of securities and prevalent trend in share prices mean by various market indices in the stock market.

7.1 Fundamental Analysis

An attempt is made to analyze various fundamental or basic factors that affect the risk-return of the securities. The effort here is to identify those securities that one perceives as mispriced in the stock market. The assumption in this case is that the 'market price' of security and the price as justified by its fundamental factors called 'intrinsic value' is different and the marketplace provides an opportunity for a discerning investor to detect such discrepancy. The moment such a description is identified, a decision to invest or disinvest is made. The decision rule under this approach is like this:

If the price of a security at the market place is higher than the one, which is justified by the security fundamentals, sell that security. This is because, it is expected that the market will sooner or later realize its mistake and price the security properly. A deal to sell this security should be based on its fundamentals; it should be both before the market correct its mistake by increasing the price of security in question. The price prevailing in market is called 'Market Price' (MP) and the one justified by its fundamentals is called 'Intrinsic Value' (IV) trading rules/ recommendations.

1. If IV > MP, buy the security
2. If IV < MP, sell the security
3. If IV = MP, no action

The fundamental factors mentioned above may relate to the economy or industry or company or all some of this. Thus, economy fundamentals, industry fundamentals and company fundamentals are considered while prizing the securities for taking investment decision. In fact, the economy-industry-company framework forms integral part of this approach. This framework can be properly utilized by making suitable adjustments in a regular context.

Notes

Caution The use of an analytical framework does not guarantee an actual decision. However, it does guarantee an informed and considered investment decision, which would hopefully be better as it based on relevant and crucial information.

7.1.1 Fundamental Analysis and Efficient Market

Before elaborating in detail on the economy-industry-company framework, it is pertinent to mention that doubts are expressed about the utility of this approach in the contest of efficient stock market set-up. Briefly, the market efficiency relates to the speed with which the stock market incorporates the information about the economy, industry and company, in the share prices, rather instantaneously.

The above given view about share market efficiency implies that no one would be able to make abnormal profits given such a set-up. Some research studies in the literature also support the above view. Practitioners, however, do not agree to such conclusions of an empirical nature.

Self Assessment

Fill in the blanks:

1. The market …….. relates to the speed with which the stock market incorporates the information about the economy, industry and company, in the share prices, rather instantaneously.
2. The price prevailing in market is called "…….. price'
3. In …….. approach, the investor attempts to look at fundamental factors that affect risk return characteristic of the security.
4. In the …….. approach, the investor tries to identify the price trends that reflect these characteristics.

7.2 Economy - Industry - Company Analysis: A Framework

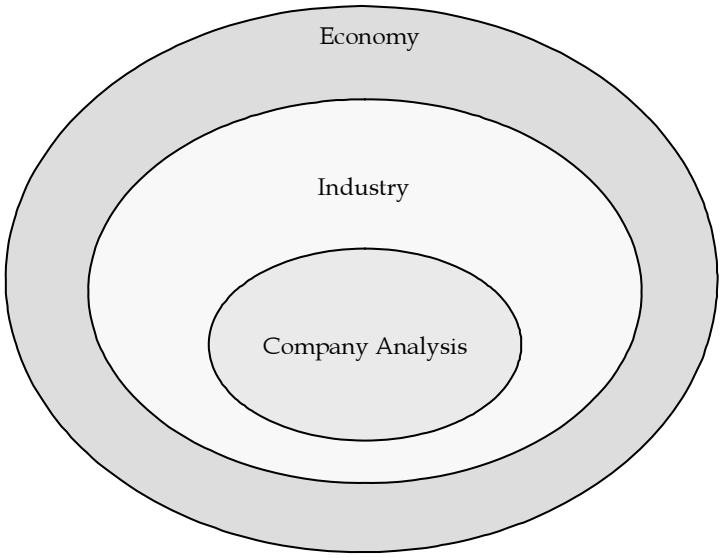
The analysis of economy, industry and company fundamentals is the main ingredient of the fundamental approach. The analyst should take into account all the three constituents that form different but special steps in making an investment decision. These can be looked at as different stages in the investment decision-making. Operationally, to base the investment decision on various fundamentals, all the three stages must be taken into account. In this unit, we will concentrate on economy analysis. In the next units, we shall focus on industry and company level analyses.

7.2.1 Economy Analysis

In actual practice, you must have noticed that investment decisions of individuals and the institutions made in the economic set-up of a particular country. It becomes essential, therefore, to understand the star economy of that country at the macro level. The analysis of the state of the economy at the macro level incorporates the performance of the economy in the past, how it is performing in the present and how it is expected to perform in future. Also relevant in this context is to know how various sectors of the economy are going to grow in the future.

Notes

Figure 7.1: Economic Analysis



Macro Economic Analysis

The analysis of the following factors indicates the trends in macro economic changes that affect the risk and return on investments:

- Money supply
- Industrial production
- Capacity utilisation
- Unemployment
- Inflation
- Growth in GDP
- Institutional lending
- Stock prices
- Monsoons
- Productivity of factors of production
- Fiscal deficit
- Credit/Deposit ratio
- Stock of food grains and essential commodities
- Industrial wages
- Foreign trade and balance of payments position
- Status of political and economic stability
- Technological innovations
- Infrastructural facilities

Notes

- Economic and industrial policies of the government
- Debt recovery and loans outstanding
- Interest rates
- Cost of living index
- Foreign investments
- Trends in capital market
- Stage of the business cycle
- Foreign exchange reserves

The Global Economy

In a globalised business environment, the top-down analysis of the prospects of a firm must begin with the global economy. The global economy has a bearing on the export prospects of the firm, the competition it faces from international competitors, and the profitability of its overseas investors.

Macroeconomic Analysis

The government employs two broad classes of macroeconomic policies, viz. demand-side policies and supply-side policies.

Did u know? Traditionally, the focus was mostly on fiscal and monetary policies, the two major tools of demand-side economics. From the 1980s onward, however, supply-side economics has received a lot of attention.

Fiscal Policy

Fiscal policy is concerned with the spending and tax initiatives of the government. It is the most direct tool to stimulate or dampen the economy.

An increase in government spending stimulates the demand for goods and services, whereas a decrease deflates the demand for goods and services. By the same token, a decrease in tax rates increases the consumption of goods and services and an increase in tax rates decreases the consumption of goods and services.

Monetary Policy

Monetary policy is concerned with the manipulation of money supply in the economy. Monetary policy affects the economy mainly through its impact on interest rates.

The main tools of monetary policy are:

- Open market operation
- Bank rate
- Reserve requirements
- Direct credit controls

Notes

7.2.2 Investment-making Process

Each of the sectors show sings of stagnation and degradation in the economy. This, we can examine and understand by studying historical performance of various sectors of the economy in the past, their performances at present and then forming the expectation about their performances in the future. It is through this systematic process that one would be able to realise various relevant investment opportunities whenever these arise. Sectoral analysis, therefore, is carried out along with overall economy analysis as the rate of growth in overall economy often differs from the rate within various segments/sectors.

Rationale of the above type of analysis depends on economic considerations too. The way people in general, their income and the way they spend these earnings would in ultimate analysis decide which industry or bunch of industries would grow in the future. Such spending affects corporate profits, dividends and prices of the shares at the many would grow in the future. A research study conducted by King (1966) reinforces the need of economic and industry analysis in this context. According to him on an average, over half the variation in stock returns is attributed to market prices that affect all the market indices. Over and above this, industry specific factors account for approximately 10 to 15 per cent of the variation of stock returns. Thus, taken together, two-third of the variation of stock prices/returns reported to market and industry related factors. King's study, despite the limitations of its period of its publication and use of US-specific data, highlights the importance of economic and industry analyses in making investment decisions. To neglect this analysis while deciding where to invest would be at one's peril.

It must be clear by this now that analysis of historical performance of the economy is a starting point; albeit an important step. But, for the analyst to decide whether to invest or not, expected future performance of the overall economy along with its various segments is most relevant. Thus, all efforts should be made to forecast the performance of the economy so that the decision to invest or to disinvest the securities can be a beneficial one. Decisions can be made in the most haphazard manner. Interestingly, this calls for using the same indicators that describe how the economy has shaped up in the past and how it is likely to take shape in the future as compared to the current state of affairs.

Notes A healthy outlook about the economy goes a long way in boosting the investment climate in general and investment in securities in particular.

7.2.3 Economic Forecasting

Still, it must be properly understood at this stage that economic forecasting is a must for making investment decision. It has been mentioned earlier too, that the fortunes of specific industries and the firm depends upon how the economy looks like in the future, both short-term and long-term. Accordingly, forecasting techniques can also be divided and categories: Short-term forecasting techniques are dealt with in detail; these terms should be clearly understood. Short-term refers to a period up to three years. Sometimes, it can also refer to a much shorter period, as a quarter or a few quarters. Intermediate period refers to a period of three to five years. Long-term refers to the forecast made for more than five years. This may mean a period of ten years or more.

Techniques used

- Economic indicators
- Diffusion index

Notes

- Surveys
- Economic Model Building

We shall discuss some short-term forecasting techniques in the following.

At the very outset, let it be mentioned that the central theme of economic forecasting is to forecast national some with its various components. This is because it summarizes the receipts and expenditures of all segments of the economy, be they government, business or households. These macro-economic accounts describe economic activities over a period of time. Not surprisingly, therefore, all the techniques focus on forecast national income and its various components, particularly, those components that have bearing on an industry and the particular industry and the company to be analysed.

GNP is a measure to quantify national income and is the total value of the final output of goods and produced in the economy. It is an important indicator of the level and the rate of growth in the economy, and is of central concern to analysts for forecasting overall as well as various components during a certain period. Following are some of the techniques of short-term economic forecasting.

Anticipatory Surveys

This is very simple method through which investors can form their opinion/expectations with respect to the future state of the economy. As is generally understood, this is a survey of expert opinions of those prominent in the government, business, trade and industry. Generally, it incorporates expert opinion with construction activities, plant and machinery expenditure, level of inventory etc. that are important economic activities. Anticipatory surveys can also incorporate the opinion or future plans of consumers regarding their spending. So long as people plan and budget their expenditure and implement their plans accordingly, such surveys should provide valuable input, as a starting point.

Despite the valuable inputs provided by this method, care must be exercised in using the information obtained through this method. Precautions are needed because:

1. Survey results cannot be regarded as forecasts per se. A consensus of opinion may be used investor in forming his own forecasts.
2. There is no guarantee that the intentions surveyed would certainly materialize. To this extent, they cannot rely solely on these.

Despite the above limitations, surveys are very popular in practice and used for short-term forecast of course, requires continuous monitoring.

7.2.4 Barometric or Indian Approach

In this approach, various types of indicators are studied to find out how the economy is likely to behave in future. For meaningful interpretations, these indicators are roughly classified into leading, lagging and coincidental indicators.

Leading indicators: As the name suggests, these are indicators that lead the economic activity in their outcome. That is, these are those time series data of the variables that reach their high points as well low points in advance of the economic activity.

Lagging indicators: These are time series data of variables that lag behind in their consequences vis-à-vis the economy. That is, these reach their turning points after economy has already reached its own.

Notes

In developed countries, data relating to various indicators are published at short intervals. For example, the Department of Commerce publishes data regarding various indicators in each of the following categories:

Leading Indicators

- Average weekly hours of manufacturing production workers
- Average weekly in initial unemployment claims
- Contacts and orders for plant and machinery
- Index of S&P 500 stock prices
- Money supply (M2)
- Change in sensitive material prices
- Change in manufacture's unfilled orders (durable goods industries)
- Index of consumer expectations.

Coincidental Indicators

- Index of industrial production
- Manufacturing and trade sales
- Employee on non-agricultural payrolls
- Personal income less transfer payment

Lagging Indicators

- Average duration of unemployment
- Ratio of manufacturing and trade inventories to sales
- Average prime rate
- Outstanding commercial and industrial loans

The above list is not exhaustive. It is only illustrative of various indicators used by investors. A word of caution will not be out of place here as forecasting based solely on leading indicators is a hazardous business. One has to be quite careful in using them. There is always a time lag it with result that interpretation can be erroneous, if it is not done well in advance. Interpretation even if performed meticulously, cannot be fruitfully utilized. Further, problems with regard to their interpretation exist as well. Indicators are classified under the broad category of leading indicators. Their various measures may emit conflicting signals about the future direction of the economy; the use of diffusion index or composite index has, thus, been suggested. This deals with the problem by combining several indicators into one index in order to measure the strength or weaknesses of the problem by combining several indicators into one index in order to measure the strength or weaknesses of a particular kind of indicator. Care has to be exercised even in this case as diffusion indices are also without problems. Apart from the fact that its computations are difficult, it does not eliminate the varying factors in the series. Despite these limitations, indicator approach/diffusion index can be useful tool in the armoury of a skilful forecaster.

Notes

7.2.5 Money and Stock Prices

Analysts have recognized that money supply in the economy plays a crucial part in the investment decision per se. The rate of change in the money supply in the economy affects the GNP, corporate profits, interest rates and prices. Accordingly, monetarists argue that total money supply in the economy and its rate of change has an important influence the stock prices as a hedge against inflation, and increases in stock prices sometimes.

7.2.6 Diffusion Index

A diffusion index is an indicator of the extensiveness or spread of an expansion or contraction. It has been developed by the National Bureau of Economic Research, USA.

There are two main categories of diffusion index:

1. ***Composite or Consensus Index:*** It combines several indicators into one single measure, in order to measure the strength or weakness in the movements of these particular time series of data.

   For instance, there are ten leading indicators; out of them four are moving up and others are not. How do we interpret it?

   $$\text{Diffusion Index} = \frac{\text{No of members in the set in the same direction}}{\text{Total no. of members in the set}}$$

   In the example, diffusion index = 4/10 = 0.4

   Next month, if the index moved to 0.6, it certainly is a strong confirmation of economic advance.

2. ***Component Evaluation Index:*** This is a narrow type of index, one that examines a particular series taking into consideration its components. It measures the breadth of the movement within a particular series.

7.2.7 Geometric Model Building Approach

This is an approach to determine the precise relationship between the dependent and the independent variables. In fact, econometrics is a discipline wherein application of mathematics and statistical techniques is a part of economic theory. It presupposes the precise and clear relationship between the dependent and independent variables and the onus of such well-defined relationship with its attendant assumptions rests with the analyst. Thus, by geometrics, the analyst is able to forecast a variable more precisely than by any other approach. But this derived approach would be as good as the data inputs used and assumptions made.

Static Model Building or GNP Model Building or Sectoral Analysis is frequently used in particular in the methods discussed earlier. These use national accounting framework in making short-term forecasts. The various steps while using this approach are:

- Hypothesize the total demand in the economy as measured by its total income (GNP) based on likely conditions in the country like war, peace, political instability, economic changes, level and rate of inflation etc.
- Forecast the GNP figure by estimating the levels of its various components like:
  - Consumption expenditure
  - Private cosmetic investment

Notes

- Government purchases of goods and services
- Net exports

- Forecasting the individual components of GNP, the analysis then adds them up to obtain a figure of the GNP.
- The analyst compares the total of GNP and arrives at an independent estimate appropriately. The forecast of GNP is an overall forecast for internal consistency. This is done to ensure that both his total forecast and permanent forecast make sense and fit together in a reasonable manner.
- Thus the GNP model building involves all the details described above with a considerable amount of judgment.
- What has accounted for this suddenly revived economy? One likely answer is definitely a cut in customs and a corresponding reduction in excise, which has helped reduce the cost structure of a number of products. This has made a number of products cheaper in the domestic market and expanded the demand for them in the process.

Caselet

How Different are Fundamental and Technical Analysis?

We should note here, before going on with our discussion of the various aspects of the two analytical schools, that while the explanations of the fundamental and technical analyst on a phenomenon may differ from each other, the end result, and the trade recommendation can in many cases be the same.

To give an example of this, we may examine the classical case of a parabolic price graphic which would make both kinds of analysts cautious, but for different reasons. The technical analyst would look at his charts, notice the extreme values registered on the indicators, and would caution against joining a trend that is in danger of suffering a sharp reversal as the inevitable countertrend movement occurs. The fundamental analyst would look at the euphoria in news sources and analyst community, consider the declarations of government authorities and important personages, and would probably give the same warning. While the tools and indicators used by these two individuals are different, their actions often coincide with each other.

Fundamental and technical analysis is not exactly the same thing, and at least in the longer term, the predictive power of fundamental studies is almost certainly greater. Nonetheless, these two are akin to two different languages describing the same phenomenon, and at least on hindsight, they always show the same direction, and reach the same conclusions.

Source: http://www.forexfraud.com/learn-forex-trading/fundamental-analysis-vs-technical-analysis.html

7.2.8 Economy and Industry Analysis

Investment decisions are a part of our economic life, made by almost everybody in different contexts at different times. The highly subjective nature of such decisions and the varying results that they offer therefore, necessitate a further study and analysis into the same.

Notes

Long regarded as an art, investment decision-making has only recently been considered as science with an attendant body of literature being developed helping us understand its dynamics. Investment decision-making is now accepted both as an art as well as a science. Decision-makers attempt to update themselves on the characteristics of returns securities, which keep changing. Their understanding needs sustained efforts.

Changes in the management of any particular company or changes in government policy at macro level can bring about changes in the attractiveness of certain securities.

Example: Before 1992-93, the shares of sugar industry in India did not catching the attention of the investing public. But due to changes in the government policy towards this industry around 1999, sugar industry shares became quite attractive. Policy changes made by the government related to hike in the sugar per sold both in open market as well as through public distribution system, increase in the quantity of sugar for sale in the free market etc. played a very important role in making the shares of sugar companies attractive. There may be other factors too, that are more specific to a particular company or industry.

Table 7.1: Opportunities and Threats in the Macro-economic Environment

S. No.	Economic Indicator	Opportunity	Threat
1.	Economic cycle stage	Boom	Recession
2.	Gross National Product	Growth	Decline
3.	Employment	Increase	Decrease
4.	Aggregate demand	Rise	Fall
5.	Personal disposable income	Increase	Decrease
6.	House construction	Increase	Decrease
7.	Personnel savings during inflation	Increase	Decrease
8.	Rate of interest	Low	High
9.	Corporate taxation	Low	High
10.	Balance of trade	Positive	Negative
11.	Rupee in foreign exchange market	Strong	Weak
12.	Prices	Stable	Unstable

Task List down the trends that indicate the macro-economic changes affecting the risk and return on investment.

Self Assessment

Fill in the blanks:

5. The analysis of the state of the economy at the …….. level incorporates the performance of the economy in the past, how it is performing in the present and how it is expected to perform in future.

6. …….. policy is concerned with the spending and tax initiatives of the government.

Notes

7. An …….. in government spending stimulates the demand for goods and services.

8. …….. policy is concerned with the manipulation of money supply in the economy.

9. Monetary policy affects the economy mainly through its impact on …….. rates.

10. …….. is very simple method through which investors can form their opinion/ expectations with respect to the future state of the economy.

11. In …….. approach, various types of indicators are studied to find out how the economy is likely to behave in future.

12. …….. indicators lead the economic activity in their outcome. That is, these are those time series data of the variables that reach their high points as well low points in advance of the economic activity.

13. …….. are time series data of variables that lag behind in their consequences vis-à-vis the economy. That is, these reach their turning points after economy has already reached its own.

14. …….. Index combines several indicators into one single measure, in order to measure the strength or weakness in the movements of these particular time series of data.

15. ……..Evaluation Index is a narrow type of index, one that examines a particular series taking into consideration its components. It measures the breadth of the movement within a particular series.

Case Study

Deciding on Critical Gas Infrastructure Investments

Our client faced several competing options to upgrade their gas infrastructure facilities. However, decision-making lacked urgency, with our client uncertain of the proposals' impact on uptime and total business costs. The process had reached a stalemate. SBC was engaged to independently assess the options from HSE, business risk, and cost perspectives.

Evaluating True Cost of Investment and Delay

Our first step was to demonstrate asset criticality and raise the sense of urgency among client stakeholders. Having analyzed the asset's piping integrity; we revealed just how close the asset was to undergoing a significant drop in reliability and the potential business risks of continued non-compliance. We also calculated the financial costs and impact on oil production any inevitable shutdown would have.

Our second step was to evaluate alternative approaches to meeting future needs of the asset, concluding that an 'all at once' approach would be far more successful than a piecemeal one. We assessed and compared the two best options to improve the asset's gas infrastructure, which were both still at the client's concept selection stage. We made recommendations based on our analysis of many factors including:

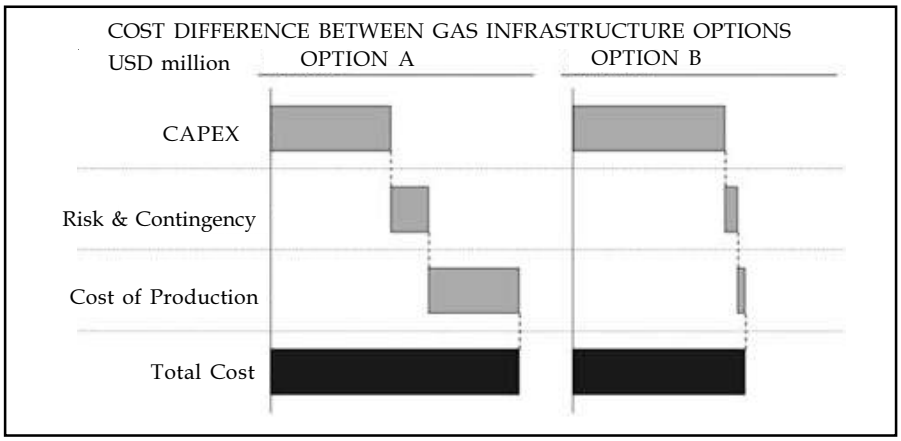
- Base cost
- Risk

Contd...

Notes

- Loss of oil
- Probability of delay
- Tie-ins and man-hours required for shutdown

Analysis flagged real cost differences between gas infrastructure options



Progress to FEED

Based on our recommendations, the client swiftly chose an alternative capex option, removing the impasse and enabling it to progress to the front end engineering design (FEED) stage without further delays.

Question

Discuss the case in brief.

Source: http://www.sbc.slb.com/Our_Work/Energy_Expertise/Gas/Case_Study_Deciding_on_Critical_Gas_Infrastructure_Investments.aspx

7.3 Summary

- A commonly advocated procedure for fundamental analysis involves a 3-step analysis: macro-economic analysis, industry analysis, and company analysis.
- In a globalised business environment, the top-down analysis of the prospects of a firm must begin with the global economy.
- There are two broad classes of macroeconomic policies, viz. demand side policies and supply side policies.
- Fiscal and monetary policies are the two major tools of demand side economics.
- Fiscal policy is concerned with the spending and tax initiatives of the government.
- Monetary policy is concerned with money supply and interest rates.
- The macro-economy is the overall economic environment in which all firms operate.
- Changes in the management of any particular company or changes in government policy at macro level can bring about changes in the attractiveness of certain securities.

Notes

7.4 Keywords

***Component Evaluation Index*:** This is a narrow type of index, one that examines a particular series taking into consideration its components. It measures the breadth of the movement within a particular series.

Diffusion Index: It is an indicator of the extensiveness or spread of an expansion or contraction.

Fiscal Policy: It is concerned with the spending and tax initiatives of the government. It is the most direct tool to stimulate or dampen the economy.

GNP: GNP is a measure to quantify national income and is the total value of the final output of goods and produced in the economy.

Lagging Indicators: These are time series data of variables that lag behind in their consequences vis-à-vis the economy. That is, these reach their turning points after economy has already reached its own.

Leading Indicators: As the name suggests, these are indicators that lead the economic activity in their outcome. That is, these are those time series data of the variables that reach their high points as well low points in advance of the economic activity.

Market Price: Price prevailing in market.

Monetary Policy: It is concerned with the manipulation of money supply in the economy.

7.5 Review Questions

1. Define fundamental analysis.
2. What is economic forecasting?
3. Define EIC Analysis.
4. Define Diffusion Index.
5. What are the factors influencing economic analysis?
6. What are the opportunities and threats in the macro-economic environment? Explain in detail.
7. What are the techniques used in economic analysis?
8. Explain the barometric Indian approach.
9. Explain the geometric module building approach.
10. Distinguish among the leading, lagging and coincidental indicators.

Answers: Self Assessment

1.	Efficiency	2.	Market
3.	Fundamental	4.	Technical
5.	Macro	6.	Fiscal
7.	Increase	8.	Monetary
9.	Interest	10.	Anticipatory Surveys
11.	Barometric or Indian Approach	12.	Leading

Notes

13. Lagging indicators
14. Composite or Consensus
15. Component

7.6 Further Readings

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Notes

Unit 8: Fundamental Analysis 2: Industry Analysis

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Objectives

After studying this unit, you will be able to:

- Explain the concept of industry analysis
- Discuss the importance of industry analysis
- Elaborate the analytical framework
- Discuss the forecasting methods

Introduction

After conducting an analysis of the economy and identifying the direction it is likely to take in the short, interim and long-term, the analyst must look into various sectors of the economy in terms of various industries. An industry is a homogenous group of companies. That is, companies with similar characteristic can be divided into one industrial group. There are many bases on which grouping of companies can be done. For example, traditional classification is generally done product-wise like pharmaceuticals, cotton textile, synthetic fibre etc. Such a classification, through useful, does not help much in investment decision-making.

8.1 Industry Analysis

Some of the useful bases for classifying industries from the investment decision-point of view are as follows:

- ***Growth Industry:*** This is an industry that is expected to grow consistently and its growth may exceed the average growth of the economy.

Notes

- ***Cyclical Industry:*** In this category of the industry, the firms included are those that move closely with the rate of industrial growth of the economy and fluctuate cyclically as the economy fluctuates.
- ***Defensive Industry:*** It is a grouping that includes firms, which move steadily with the economy and less than the average decline of the economy in a cyclical downturn.

Another useful criterion to classify industries is the various stages of their development. Different stages of their life cycle development exhibit different characteristic. In fact, each development is quite unique. Grouping firms with similar characteristics of development help investors to properly identify different investment opportunities in the companies. Based on the stage in the life cycle, industries are classified as follows:

Pioneering stage: This is the first stage in industrial life cycle of a new industry. In this, technology and its products are relatively new and have not reached a stage of perfection. There is an experimental order both in product and technology. However, there is a demand for its products in the market; the profits opportunities are in plenty. This is a stage where the venture capitalists take a lot of interest, enter the industry and sometimes organize the business. At this stage, the risk commences in this industry and hence, mortality rate is very high. If an industry withstands them, the investors would reap the rewards substantially or else substantial risk of investment exists. A very pertinent example of this stage of industry in India was the leasing industry, which tried to come up during the mid-eighties. There was a mushroom growth of companies in this period. Hundreds of companies came into existence. Initially, lease rental charged by them were very high. But as competition grew among firms, lease rentals reduced and came down to a level where it became difficult for a number of companies to survive. This period saw many companies that could not survive the onslaught of competition of those firms that could tolerate this onslaught of price war, could remain in the industry. The leasing industry today is much pruned down compared to the mid-eighties.

Fast growing stage: This is the second stage when the chaotic competition and growth that is the hallmark of the first stage is more or less over. Firms that could not survive this onslaught have already died. The surviving large firms now dominate the industry. The demand of their product still grows faster, leading to increasing amount of profits the companies can reap. This is a stage where companies grow rapidly. These companies provide a good investment opportunity to the investors. In fact, as the firms during stage of development grow faster, they sometimes break records in various areas, like payment of dividend and become more and more attractive for investment.

Security and stabilization stage: The third stage where industries grow roughly at the rate of the economy, develop and reach a stage of stabilization. Looked at differently, this is a stage where the ability of the industry appears to have more or less saturated. As compared to the competitive industries, at this stage, the industry faces the problem of what Grodinsky called "latent obsolescence" a term used to a stage where earliest signs of decline have emerged. Investors have to be very cautions to examine those sings before it is too late.

Relative decline stage: The fourth stage of industrial life cycle development is the relative decline. The industry has grown old. New products, new technologies have entered the market. Customers have new habits, styles, likes etc. The company's/industry's products are not much in demand as was in the earliest stage. Still, it continues to exist for some more time. Consequently, the industry would grow less than the economy during the best of the times of the economy. But as is expected, the industry's decline is much faster than the decline of the economy in the worst of times.

The characteristics of different stages of life cycle development of industries have a number of implications for decisions. Investment at this stage is quite rewarding. However, for an investor looking for steady forms with risk aversion, it is suggested that he should in general avoid

investing at this stage. But if he is still keen to invest, he should try to diversify or disperse his investment price the risk. It would be quite prudent on this part to look for companies that are in the second date i.e., fast growth. This probably explains the prevalent higher stock prices of the companies of this industry.

Notes From the investment point of view, selection of the industries at the third stage of development is quite crucial. It is the growth of the industry that is relevant and not its past performance. There are a number of cases where the share prices of a company in a declining industry have been artificially hiked up in the market, on the basis of its good performance. But the fact of the matter is that a company in such an industry would sooner or later feel the pinch of its decline and an investor investing in such companies experiences a reduction in the value of his investment in due course.

Having discussed various investment implications, it may be pointed out that one should be careful while classifying them. This is because the above discussion assumes that the investor would be able to identify the industrial life cycle. In practice, it is very difficult to detect which stage of the industry is at. Needless to say, it is only a general framework that is presented above. One can spangle this analysis with suitable modifications. In order to strengthen the analysis further, it is essential to outline the features of the industry in detail. Due to its unique characteristic, unless the specific industry is analysed properly and in depth with regard to these, it will be very difficult to form an opinion for profitable investment opportunities.

1. There is competition among domestic and foreign firms, both in the domestic and the foreign markets. How do firms perform here?
2. Many types of products are manufactured in this industry. Are these homogenous in nature or highly heterogeneous?
3. What is the nature and prospect of demand for the industry? Are these homogenous in nature or highly heterogeneous?
4. This may also incorporate the analysis of the markets of its products, customer-wise and geographical area-wise, identifying various determinants of this type of industry its growth, cyclical, defensive or relative decline industry.

Self Assessment

Fill in the blanks:

1. In Cyclical Industry the firms included are those that move closely with the rate of ……..... growth of the economy and fluctuate cyclically as the economy fluctuates.
2. Defensive Industry is a grouping that includes firms, which move steadily with the ……..... and less than the average decline of the economy in a cyclical downturn.
3. ……..... Industry is expected to grow consistently and its growth may exceed the average growth of the economy.

8.2 Importance of Industry Analysis

Why should a security analyst carry out industry analysis? To answer this question, logically, two arguments are presented:

1. Firms in each different industry typically experience similar levels of risk and similar rates of return. As such, industry analysis can also be useful in knowing the investment-Worthiness of a firm.

Notes

2. Mediocre stocks in a growth industry usually outperform the best stocks in a stagnant industry. This points out the need for knowing not only company prospects but also industry prospects.

Risk-return patterns: Economic theory points out those competitive firms in an industry try to maximize their profits by adopting fairly similar policies with respect to the following:

1. The labour-capital ratio utilized by each firm.
2. Mark ups, profit margins and selling prices.
3. Advertising and promotional programmes.
4. Research and development expenditures.
5. Protective measures of the government.

At such, they have the same risk level as well as rates of return, on an average. Empirical evidence shown by research done by Fabozzi and Francis supports this argument.

Growth Factor: All industries do not have equally good or equally bad experiences and expectations; their fortunes keep on changing. It implies that the past is not a good indicator of the future – if one looks very far into the future.

Did u know? This view is well supported by research. Researchers have ranked the performance of different industries over a period of one year and then ranked the performance of the same industries over subsequent periods of years. They compared the ranking and obtained near zero correlations. It implies that an industry that was good during one period of time cannot continue to be good in all periods.

Another observation is every industry passes through four distinct phases of the life cycle. The stages may be termed as pioneering, expansion, stagnation and decline. Different industries may be in different stages. Consequently their prospects vary. As such, separate industry analysis is essential.

8.2.1 Classification of Industries

There are different ways of classifying industrial enterprises.

- ***Classification by Reporting Agencies:*** In India, The Reserve Bank of India has classified industries into 32 groups. Stock exchanges have made a broad classification of industry into 10 groups.

  Business media have their own classification. The Economic Times classifies industry into 10 groups and the Financial Express into 19 groups. The groups are further sub-divided.

- ***Classification by Business Cycle:*** The general classification in this framework is growth, cyclical, defensive and cyclical growth. Growth industries are characterized by high rates of earnings expansion, often independent of business cycles. These industries are pioneers of a major change in the state of the art i.e., innovation diffusing concerns. The ongoing revolution in the electronics industry and communications equipments is an example of this kind.

  - Cyclical industries are closely related to business cycles. Prosperity provides consumers purchasing power and boom to industry whereas depression adversely affects them. Consumer durables are subject to these kinds of changes.

Notes

- Defensive industries are those the products of which have relatively inelastic demand. Food processing industry is an example.
- Cyclical growth industries are those that are greatly influenced by technological and economic changes. The airline industry can be cited as an example.

8.2.2 Key Indicators in Analysis

The analyst is free to choose his or her own indicators for analyzing the prospects of an industry. However, many commonly adopt the following indicators.

- Performance factors like
  - Past sales
  - Past earnings
- Environment factors like
  - Attitude of government
  - Labour conditions
  - Competitive conditions
  - Technological progress
- Outcome factors like
  - Industry share prices
  - Price earnings multiples with reference to these key factors, evaluations shall be done to identify.
  - Strengths and weaknesses
  - Opportunities and threats

Some relevant questions that may be asked in this connection are given here. They are only illustrative and not exhaustive.

1. Are the sales of industry growing in relation to the growth in Gross National Product (GNP)?
2. What is overall return on investment (ROI)?
3. What is the cost structure of the industry?
4. Is the industry in a stable position? Does the success or failure of the industry depend upon any single critical factor?
5. What is the impact of taxation upon the industry?
6. Are there any statutory controls in matters of raw materials allotment, prices, distribution etc? Are they protective or crippling?
7. What is the industrial relations scenario of the industry?
8. Is the industry highly competitive? Is it dominated by one or two major companies? Are they Indian or foreign? Is there sufficient export potential? Are international prices comparable to domestic prices?
9. Is the industry highly technology-based? At what pace technological advancements are taking place?

Notes

10. How does the stock market evaluate the industry?

11. How are the leading scrips in the industry evaluated by the stock market?

Self Assessment

Fill in the blanks:

4. ..... industries are closely related to business cycles. Prosperity provides consumers purchasing power and boom to industry whereas depression adversely affects them. Consumer durables are subject to these kinds of changes.

5. ..... industries are those the products of which have relatively inelastic demand. Food processing industry is an example.

Caselet

Workforce Management Market Analysis

Client

A National ILEC

Challenge

The ILEC was looking to build their strategy and business case for developing Next Generation Workforce Management capabilities.

DataLinx Solution

DataLinx proposed a capability analysis be done including a survey of leading Dispatch Systems and Solutions being offered in the market today.

This market evaluation was structured and performed as follows:

- An industry scan of the WFM market vendors was done and a short list of leading vendors compiled.
- DataLinx developed an evaluation methodology along with comprehensive analysis criteria that was compiled into a RFI questionnaire and distributed to the WFM vendors.
- The compilation of vendor responses and marketing material followed along with in depth and comparative analysis of the vendors' individual Business, Operational, Functional, Technical, and Next Generation capabilities.
- On-site meetings and functionality demonstrations were performed with each vendor to better grasp the practical aspects of the key Dispatch Systems functionality, the strategy and vision from the vendor point of view, as well as to do a validation of capabilities.

Results

A confidential report was prepared and presented to our customer's Senior Management team. The report included an executive summary and detailed analysis of the Business, Operational, Functional, Technical, and Next Generation direction for each vendor as well as within the WFM industry as a whole. This information was captured and presented in a manner that enabled our customer to make clear comparisons of the key WFM enabling factors which ultimately enabled their WFM strategy and business case activities.

Source: http://www.datalinx.net/casestudies3.htm

8.3 Analytical Frameworks

Notes

We have identified various factors and questions relating to industry analysis. Now, we shall consider the frameworks within which the analysis may be carried out.

- ***Industry life-cycle stages (product life cycle theory):*** Every industry passes through different stages in its lifetime. The stages can be identified as follows:
  - *Pioneering Stage:* This stage is characterized by introduction of a new product, and an uptrend in business cycle that encourages new product introductions. Demand keeps on growing at an increasing rate. Competition is generated by the entry of new firms to grab the market opportunities. Weaker firms face premature death while stronger one survives to grow and expand.
  - *Expansion Stage:* This is characterized by the hectic activity of firms surviving the pioneering stage. After overcoming the teething problems, the firms continue to improve financially and competitively. The market continues to grow but slowly, offering steady and slow growth in sales of the industry. It is a phase of consolidation wherein companies establish durable policies relating to dividends and investments.
  - *Stabilization Stage:* This stage shows signs of slow progress and also prospects of decay. The stagnation in the economy and the pedestrian nature of the product call for innovative strategies to begin a new life-cycle. Grodinsky explains this transition from the rising to the crawling age with reference to latent obsolescence.

    "Latent obsolescence – while an industry is still expanding economic and financial infection may develop. Though its future is promising, seeds of decay may already have been planted. These seeds may not germinate; the latent decay becomes real. These seeds may be described as "latent obsolescence", because they may not become active, and they are the earliest signs of decline. Such factors must be examined and interpreted by the investor."

> *Notes* Symptoms of latent obsolescence include changing social habits, high labour costs, changes in technology, stationary demand.

- ***Decay stage:*** An industry reaches this stage when it fails to detect the death signal and implement – proactively or reactively – appropriate strategies. Obsolescence manifests itself, affecting a decline in sales, profit, dividends and share prices.

Implications to the Investor: This approach is useful to the analyst as it gives insights, not apparent merits and demerits of investments in a given industry at a given time. What the investor has to do is.

1. Collect relevant data to identify the industry life cycle stage
2. Forecast the probable life period of the stage
3. Decide whether to buy, hold or sell.

Figure 8.1 shows the diagrammatic presentation along with the indicators of each stage. Although the industry life cycle theory appears to be very simple, it is no so in practice. Proper identification of the life cycle stage is difficult. Temporary setbacks or upheavals may confuse the analyst. Further, how long the stage continues is difficult to predict.

The internal analysis can be done periodically to evaluate strengths and weaknesses either by inside company executives or outside consultants. This can be done by using a form such as the

Notes

one shown in Figure 8.1. Each factor, minor or major weakness is displayed. Of course, not all factors are equally important for succeeding in business. Therefore, it is necessary to rate the importance of each factor – high, medium or low. When combining performance and importance levels, four possibilities emerge.

Figure 8.1: Importance – Performance Matrix

		Performance	
		Low	High
	High	A. Concentrate here	B. Keeping the good work
Importance	Low	C. Take enough care	D. If overkill, divert

Caution This analysis provides norms for management attention. For example, an industry is performing poorly in a high priority area. It should hence concentrate here. If the industry strategy is not addressed to this, it becomes unattractive to the investor.

Self Assessment

Fill in the blanks:

6. ……..... growth industries are those that are greatly influenced by technological and economic changes. The airline industry can be cited as an example.
7. ……..... stage is characterized by introduction of a new product, and an uptrend in business cycle that encourages new product introductions. Demand keeps on growing at an increasing rate.
8. An industry reaches ……..... stage when it fails to detect the death signal and implement – proactively or reactively – appropriate strategies.

8.4 Forecasting Methods

The techniques for analyzing information about industry within a time framework are briefly explained in this section.

8.4.1 The Market Profile

A market profile consists of those endogenous characteristics that have a significant bearing on demand or the way in which it can be developed. Its basic elements are:

- Number of establishments
- Geographical location of establishment
- Number of employees
- Value of sales
- Value added by manufacturing
- Capital expenditures

Notes

- Degree to which establishments are specialized
- Importance of their output in the national total

The trend of these elements when analysed, reveal vital information about the position and progress of the industry. Illustratively some lead points are given here:

- A decrease in number of establishments and employment accompanied by an increase in the other elements of the profile means increased automation.
- An increase in value of sales, unaccompanied by an increase in value added and capital expenditure signifies rising prices.
- An increase in value added without an increase in capital expenditure signifies increase in labour productivity.
- A fall in the share of industry in national total implies decline of industry.

8.4.2 Cumulative Methods

These are based either on market surveys or statistical measurements:

1. ***Surveys:*** Surveys are carried out by research agencies, consultants, industry association and the research bureau of media. These surveys generally study the current facilities and demand, future demand and proposed investment, and thereby the expansion prospects vis-à-vis demand gap. Other factors like, strengths and weaknesses of the organization, environmental forces are also brought into focus to evaluate the future of the industry.

Notes Surveys adopt the methodology of inquiry, through questionnaires and interviews. The subjects will be either manufacturer or dealers/end users.

2. ***Correlation and Regression analysis:*** Statistical methods like correlation and regression analysis can be of much help in demand measurement. The following steps have general application.

   (i) Determine the total requirement for the type of product in question by present customers in each industry classification.

   This can be done by asking the customer or obtaining the estimate from the salesmen, or by comparing with other customers of same size and class.

   (ii) Correlation product requirement of customer establishments with a variable to output for which accurate published data are available. Generally, employment is the most useful variable.

   The correlation can be observed by preparing a scatter diagram, as or calculating mathematically, using the formula given below:

   $$\text{Degree of relationship (r)} = \frac{N\Sigma(xy) - (\Sigma x)(\Sigma y)}{[n\Sigma x^2 - (\Sigma x)^2][N\Sigma x^2 - (\Sigma y)^2]}$$

   Where X = Number of employees

   Y = Number product items

   The nearer the correlate n coefficient is to +1 or – 1, the closer the relationship of the two variables under study.

Notes

The significance of the relationship can be determined using hypothesis testing procedure.

(iii) Apply the relationship to estimate demand. If the degree of correlation between purchases of a given product by present customers and their employment size is considered significant, the demand estimation can be done as follows:

- Computing the average number of items purchased per employee and applying this ratio to total employment.
- Formulating an estimating equation through regression method.

$$\sum y = Na + b\sum x$$

$$x\sum y = a\sum x + b\sum x$$

Where, a equals the number of products purchased when employment is zero and b equals the amount of change in the number of products purchased with every change in total employment.

Caution The latter method is more accurate because it is more sensitive to the influence of independent variable on dependent variable.

Multiple regression analysis facilitates the study of impact of more than one independent variable on the dependent variable.

$Y = a + bx_1 + cx_2 + dx_3 + ex_4 + fx_5$

Where Y = Yearly sales in lakhs of rupees.

x_1 = yearly sales (lagged one year) in lakhs of rupees

x_2 = yearly advertising expenditure in lakhs of rupees

x_3 = a dummy variable

x_4 = year

x_5 = disposable personal income in lakhs of current rupees

3. ***Time series analysis:*** Time series analysis consists of decomposing the original sales series over a period of time. The elements derived are:

Trend (T): It is the result of basic developments in population, capital formation, and technology. It is found by fitting a straight or curved line through past sales.

Cycle (C): It captures the wave-like movement of sales. Many sales are affected by swings in general economic activity, which tends to be somewhat periodic. The cyclical component can be useful in intermediate range forecasting.

Season (S): It refers to a consistent pattern of sales movements within the year. The term season describes any recurrent sales pattern. The seasonal component may be related to weather factors, holidays, and trade customs. The seasonal pattern provides a norm for forecasting short-range sales.

Erratic Events (E): It refers to the unpredictable sales caused by unforeseen events like strikes, riots, war scares, floods, and other disturbances.

Another time series technique is exponential smoothing. For industries with several items in product line, this technique is useful to produce efficient and economical short-run forecasts. It requires only three pieces of information.

Notes

- This period's actual sales (Q_t)
- A smoothing parameter (a), where

Sales forecast for next period (Q_{t+1}) = $Q_t + (1 - a)Q_t$

The initial level of smoothed sales can simply be the average sales for the last few periods. The smoothing constant is derived by trial and error testing of different smoothing constants between zero and one, to find the constant that produces the best fit of past sales.

8.4.3 Conditions and Profitability

The worth of a share depends on its return, which in turn depends on the profitability of the company. It is interesting that growth is an essential variable but its mere presence does not guarantee profitability. Profitability depends upon the state of competition prevalent in the industry. Cost control measures adopted by its units and the growth in demand for its products. While conducting an analysis from the point of view of profitability, some relevant aspects to be investigated are:

- How is the cost allocation done among various heads like raw materials, wages and overheads? Knowledge about the distribution of costs under various heads is very essential as this gives an idea to investors about the controllability of costs. Some industries have much higher overhead costs than others. Labour cost is another area that requires close scrutiny. This is because finally whether labour is cheap or expensive depends on the wage level and labour productivity. Labour that apparently looks cheaper may turn out to be when its productivity is taken into account.
- Price of the product of the industry.
- Capacity of production-installed, used, unused etc.
- Level of capital expenditure required to maintain or increase the productive efficiency of the industry.

Profitability is another area that calls for a thorough analysis on the part of investors. No industry can survive in the long run if it is not making profits. This requires thorough investigation into various aspects of profitability. However, such an analysis can begin by having a bird's eye view of the situation. In this context, ratio analysis has been found quite useful. Some of the important often used are:

- Gross Profit Margin ratio
- Operating Profit Margin ratio
- Rate of Return on Equity
- Rate of Return on Total Capital

Ratios are not an end in themselves. But they do indicate possible areas for further investigation.

Technology and Research

Due to increasing competition in general, technology and research play a crucial part in the growth and survival of a particular industry. However, technology itself is subject to change; sometimes, very fast, and can lead obsolescence. Thus only those industries, which update themselves in the field of technology, can attain competitive advantage over others in terms of the quality, pricing of products etc.

Notes

The relevant questions to be probed further by the analyst in this respect could include the following:

- What is the nature and type of technology used in the industry?
- Are there any expected changes in the technology in terms of offering new products in the market to increase in sales?
- What has been the relationship of capital expenditure and the sales over time?
- Whether more capital expenditure has led to increase in sales or not
- What has been the amount of money spent in the research and development activities of the firm? Did amount on the research and development in the industry relate to its redundancy or otherwise?
- What is the assessment of this industry in terms of its sales and profitability in the short, intermediate and long run?

The impact of all these factors have to be finally translated in terms of two most crucial numbers i.e. profitability - their level and expected rate of change during short, intermediate and long run.

8.4.4 Industry Analysis Factors

The securities analyst will take into consideration the following factors into account in assessing the industry potential in making investments:

- Post-sales and earnings performance
- The government's attitude towards industry
- Labour conditions
- Competitive conditions
- Performance of the industry
- Industry share prices relative to industry earnings
- Stage of the industry life cycle
- Industry trade cycle
- Inventories build-up in the industry
- Investors' preference over the industry
- Technological innovations

Techniques of Industry Analysis

So far, we have discussed about various factors that are to be taken into account while conducting industry analysis. Now, we turn our attention towards various techniques that help us evaluate the factors mentioned above.

End Use and Regression Analysis: It is the process whereby the analyst or investor attempts to dial the factor that determines the demand for the output of the industry. This is also known as end-use demand analysis. In this process, the investor hopes to uncover the factors that explain the demand. Some of the factors are found to be powerful in explaining the demand for the product, like disposable income per capital consumption, price elasticity of demand and per capital income. In order to identify the factors that affect demand, statistical techniques like regression analysis and correlation have often been used. These help identify the important factors/variables. However, one should be aware of their limitations.

Notes

Input Output Analysis: This analysis helps us understand demand analysis in greater detail. Input of analysis is a very useful technique that reflects the flow of goods and services through the economy, including intermediate steps in the production process as the goods proceed from the raw material stage through to consumption. This information is reflected in the input-output table that reflects the pattern of consumption at all stages, not at the final stage of consumption of final goods. This is done to detect any changing patterns. It might also indicate the growth or decline of industries.

Task What are the ways of classifying industrial enterprises? Write a brief note on the various classifications.

Self Assessment

Fill in the blanks:

9. A ……..... profile consists of those endogenous characteristics that have a significant bearing on demand or the way in which it can be developed.
10. A ……..... in number of establishments and employment accompanied by an increase in the other elements of the profile means increased automation.
11. ……..... series analysis consists of decomposing the original sales series over a period of time.
12. ……..... captures the wave-like movement of sales.
13. ……..... refers to a consistent pattern of sales movements within the year.
14. The worth of a share depends on its ……....., which in turn depends on the profitability of the company.
15. ……..... depends upon the state of competition prevalent in the industry. Cost control measures adopted by its units and the growth in demand for its products.

Case Study

Trade Data Provides Chemical Research Firm with Valuable Market Analysis

Using Zepol's Trade**IQ**™, a chemical research firm receives the latest detailed trade reports to produce comprehensive market analysis.

Overview

In the world of chemical data analysis, three factors are most important to clients: timeliness of information, accuracy of results, and context for interpretation.

Timber Mill Research (TMR) specializes in taking publicly available data and creating detailed reports for specific chemicals and compounds that its clients can use to make intelligent business decisions. Because of the level of detail that is needed to provide accurate results, TMR uses the only source of transactional data available – AMS Data from U.S. Customs and Border Protection. By using this data in conjunction with other datasets and specific Freedom of Information Act requests, TMR provides clarity to its clients' international marketplaces. Delivering the data in Microsoft Excel® Pivot Tables allows its users flexibility in selecting time frames, exporters, and importers for analysis.

Contd...

Notes

Challenge

Publicly available sources of data, like the U.S. Census Bureau's U.S. Imports of Merchandise, lack certain details of transactional information, such as shipment volume and supplier information on importers of a specific chemical. Other trade data providers want to either limit usage to just one type of Bill of Lading and arbitrary product categories or charge high fees for unlimited access. TMR needed a data provider that would treat it like a partner rather than just another account.

In addition, TMR was spending nearly $2,500 on U.S. Census data to view HTS Code driven statistics in complete detail. This data set is essential to TMR's business, but it needed the complete information that available trade data tools did not provide.

Solution

TMR chose Zepol Corporation because Zepol is the only U.S. Customs data provider to allow searches across Bill of Lading types, product categories, trade lanes, and with over six years of history. By choosing Zepol, TMR no longer had a need to buy the source data from the U.S. Census Bureau and saved thousands because Trade**View**™ provided complete access to this data which was included with its subscription. Zepol assisted TMR by diving into special circumstances when additional research was needed and worked diligently to add value on top of its subscription through frequent product enhancements.

The first step that TMR takes every month is to download the shipments that arrived into Microsoft Excel® using easy-to-use, fully detailed reports from Trade**IQ**™. Because Zepol does not limit the amount of information that is exposed on the Bill of Lading, this data is the most detailed and accurate in the industry.

Results

To provide accurate shipment value information, TMR researched individual Bills of Lading using both the House and Master Bills of Lading and combined the information with other datasets, including U.S. Census data from Trade**View**™. By doing this research, it was able to accurately trend and illustrate the prices paid by different companies importing specific products.

Because HTS Codes are not a standard element of AMS Data, TMR performed searches based on specific keywords. That allowed it to pick up trade names, solution percentages, and product types. The added flexibility allowed TMR to have the most robust trade reports in the marketplace.

TMR invested great energy into delivering reports quickly and used Zepol's industry-leading loading schedule to get the most recent information available. In addition, because Trade**IQ**™ provides all of the date fields that are present within the data, TMR was able to accurately understand when a shipment was expected to arrive, when it arrived at port, and when it cleared U.S. Customs.

Due to the functionality of Trade**IQ**™, TMR delivered accurate reports in the timeliest manner. Trade**IQ**™ provided detail and robustness that is simply unmatched. While other data providers offered TMR a search engine for its research, only Zepol provides a daily trade data tool that is continuously improved and a partner in meeting the needs of its clients.

Question

Discuss the solution and result for the case issue.

Source: http://www.zepol.com/Products/TradeIQ/CaseStudies/Market-Analysis-Case-Study.aspx

Notes

8.5 Summary

- After conducting analysis of the economy and identifying the direction, it is likely to take in the short intermediate and long-term; the analyst must look into various sectors of the economy in terms of various industries.
- An industry is a homogenous group of companies. That is, companies with the similar characteristics can be divided in to one industrial group.
- There are many bases on which grouping of companies can be done.
- The securities analyst will take into consideration the following factors into account in assessing the industry potential in making investments.
- Post-sales and earnings performance, the government's attitude towards industry, labour conditions and competitive conditions are the various factors that are to be taken into account while conducting industry analysis.
- End Use and Regression Analysis is the process whereby the analyst or investor attempts to dial the factor that determines the demand for the output of the industry. This is also known as end-use demand analysis.

8.6 Keywords

Cycle (C): It captures the wave-like movement of sales. Many sales are affected by swings in general economic activity, which tends to be somewhat periodic. The cyclical component can be useful in intermediate range forecasting.

Cyclical Growth Industries: These industries are greatly influenced by technological and economic changes. The airline industry can be cited as an example.

Cyclical Industries: These industries are closely related to business cycles. Prosperity provides consumers purchasing power and boom to industry whereas depression adversely affects them. Consumer durables are subject to these kinds of changes.

Defensive Industries: Defensive industries are those the products of which have relatively inelastic demand. Food processing industry is an example.

End Use and Regression Analysis: It is the process whereby the analyst or investor attempts to dial the factor that determines the demand for the output of the industry. This is also known as end-use demand analysis.

Erratic Events (E): It refers to the unpredictable sales caused by unforeseen events like strikes, riots, war scares, floods, and other disturbances.

Season (S): It refers to a consistent pattern of sales movements within the year. The term season describes any recurrent sales pattern. The seasonal component may be related to weather factors, holidays, and trade customs. The seasonal pattern provides a norm for forecasting short-range sales.

Trend (T): It is the result of basic developments in population, capital formation, and technology. It is found by fitting a straight or curved line through past sales.

8.7 Review Questions

1. Why does portfolio manager do the industry analysis?
2. What are the factors influencing industry analysis?

Notes

3. Write notes on different types of industry.
4. Explain in detail the key indicators of industry analysis.

Answers: Self Assessment

1.	Industrial	2.	Economy
3.	Growth	4.	Cyclical
5.	Defensive	6.	Cyclical
7.	Pioneering	8.	Decay
9.	Market	10.	Decrease
11.	Time	12.	Cycle
13.	Season	14.	Return
15.	Profitability		

8.8 Further Readings

Books

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Online links

http://www.investopedia.com/university/fundamentalanalysis/fundanalysis3.asp

http://www.sias.org.sg/beginnerguide/03_02_Fundamental_Analysis.php

http://stockcharts.com/school/doku.php?id=chart_school:overview:fundamental_analysis

http://www.slideshare.net/narenderbansal1986/industry-analysis-part-of-fundamental-analysis

Unit 9: Fundamental Analysis 3: Company Analysis

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Objectives

After studying this unit, you will be able to:

- Explain the framework of company analysis
- Discuss the fundamental analyst's model
- Elaborate the growth stocks
- Discuss the forecasting earnings per share

Introduction

We have discussed the relevance of economy and industry analyses and the manner in which it is conducted. In this unit, we will discuss the company level analysis. In order to provide a proper perspective to this analysis, let us begin by discussing the way investor makes investment

Notes

decisions given his goal maximization. For earning profits, investors apply a simple and common sense decision rule of maximization. That is:

- Buy the share at a low price
- Sell the share at a high price

The above decision rule is very simple to understand, but difficult to apply in actual practice. Huge efforts are made to operationalise it by using a proper formal and analytical framework. To begin with, problems faced by the investor are: how to find out whether the price of a company's share is high or low? What is the benchmark used to compare the price of the share? The first question becomes easier if some benefits are agreed upon with which the prevailing market price can be compared. In this respect, fundamental analysis provides the investor a real benchmark in terms of intrinsic value. This value is dependent upon industry and company fundamentals. Out of these three, company level analysis provides a direct link to investor's action and his investment goal in operational terms. This is because an investor buys the equivalent of a company and not that of industry and economy. This framework indeed provides him with a proper background, with which he buys the shares of a particular company. A careful examination of the company's quantitative and qualitative fundamentals is, therefore, very essential. As Fischer and Jordan have aptly put it: "If the economic outlook suggests purchase at the time, the industry analysis will aid the investor in selecting the proper industry in which to invest. Nonetheless, when to invest and in which industry is not enough. It is also necessary to know which companies industries should be selected."

The real test of an analyst's competence lies in his ability to see not only the forest but also the trees. Superior judgment is an outcome of intelligence, synthesis and inference drawing. That is why, besides economic analysis and industry analysis, individual company analysis is important.

9.1 Framework of Company Analysis

The two major components of company analysis are:

1. Financial
2. Non-financial

A good analyst gives proper weightage to both these aspects and tries to make an appropriate judgment. In the process of evaluating the investment-worthiness of a company's securities, the analyst will be concerned with two broad categories information: (i) internal and (ii) external. Internal information consists the data and events relating to the enterprise as publicized by it. External information comprises the reports and analyses made by sources outside the company viz. media and research agencies.

9.1.1 Non-financial Aspects

A general impressionistic view is also important in evaluating the worth of a company for investing in securities. This could be obtained by gathering and analyzing information about companies, publicized in the media, the stock exchange directory, annual reports and prospectus.

1. History and business of the company
2. Top management team
3. Collaboration agreements
4. Product range

Notes

5. Future plans of expansion/diversification
6. R & D
7. Market standing – competition and market share
8. Corporate social responsibility
9. Industrial relations scenario
10. Corporate image etc.

Besides these internal factors, the external environment related to the company survival and image:

1. Statutory controls
2. Government policy
3. Industry life cycle stage
4. Business cycle stage
5. Environmentalism
6. Consumerism, etc.

9.1.2 Financial Analysis

Asset value vs. Earnings value: The asset value of a security is determined by estimating the liquidating value of the firm, deducting the claims of firm's creditors and allocating the remaining net asset value of the firm over the outstanding shares of stock. The asset value is usually estimated by consultation with: a specialist who appraises asset values and/or an accountant who gives book value of the firm.

This method is suitable only for companies heading towards bankruptcy. For them, the firm's income and dividends will be declining and discontinuous. Hence, they will have negligible value. On the other hand, for going concerns, the intrinsic value far exceeds the value of the firm's physical assets. There is a definite lack of relationship between book value and real value, in the case of prosperous firms.

Therefore, investment analysis focus their attention on the trends of earnings and the related factors like dividends, bonus issues, rights shares, and appreciation of the market value of the share. It is believed that the appropriate indices for a company's performance are market price per share (MPS) and earnings per share (EPS).

Did u know? Financial analysts interested in making investments in equality shares of a company will be concerned with the prospects of rise in value of the firm.

Self Assessment

Fill in the blanks:

1. The real test of an analyst's competence lies in his ability to see not only the forest but also the .....
2. Superior judgment is an outcome of intelligence, synthesis and ..... drawing.

Notes

3. Investment ..... focus their attention on the trends of earnings and the related factors like dividends, bonus issues, rights shares, and appreciation of the market value of the share.

4. The ..... value is usually estimated by consultation with: a specialist who appraises asset values and/or an accountant who gives book value of the firm.

Caselet

Tata Steel Financial Analysis

For Tata Steel in 2007, net working capital, quick ratio, return on investments, return on net worth, operating profit margin and gross profit margin of the company were satisfactory. However, debt-equity ratio, current ratio, net profit margin, return on capital employed and return on assets were undesirable. In 2008, only company's current ratio improved due to substantial increase in current assets position. In 2009, net working capital available was inadequate. Company's debt-equity ratio, operating profit margin and gross profit margin were desirable and current ratio, return on investments, return on net worth, return on capital employed and return on assets were found to be unsatisfactory.

Source: http://ethesis.nitrkl.ac.in/1953/

9.2 Fundamental Analyst's Model

The true economic value or intrinsic value of a share of common stock, like the value of bond or other assets, is equal to the present value of all cash flows from the asset.

$$P_{iO} = \sum_{t=1}^{\infty} \frac{d_{it}}{(1+k_i)^t}$$

$$= \sum_{t=1}^{\infty} \frac{d_o(1+g_i)^t}{(1+k_i)^t}$$

$$= \frac{d_{i1}}{k-g}$$

Where P_{iO} = Value of share i

D_{it} = Dividends of share I in the t period

K_i = Equity capitalization rate

G_{it} = Growth rate of dividends of share I (a constant)

This value is obtained by stock analysts y multiplying the 'i' the stock's normalized earnings per share (e) with price-earnings ratio or earnings multiplier (m)

$$P_{io} = e_{io}. M_{io}$$

Where P_{io} = Value of share 'I'

e_{io} = Earning of share 'c'

m_{io} = Earnings multiplier of share 'i'

Notes

The ratio of d_{io}/e_{io} is known as dividend payout ratio. From the above model it is obvious that, to determine the appropriate earnings multiplier an analysis must consider the following:

- The earnings of the security
- The risk of the security
- The growth rate of the dividend stream
- The duration of the expected growth and
- The dividend payout ratio

9.2.1 Earnings Analysis

As seen earlier, to value common stocks or other risky assets, the present value model is employed.

Present value = AQ

Where t = time period

This model gives rise to two questions:

1. How does the investor measure the income from the common stocks?
2. What discount or capitalization rate should be used?

The income question is discussed here:

Income concepts: Accountants and economists have provided two different concepts of income.

Accountant's income is the revenue over the above all the costs incurred. Economists define the income of a firm as the maximum amount, which can be consumed by the owners of the firm in any period without decreasing their future consumption opportunities.

Adjusting for economic income: Since income, which is very important is determining the value of a security, is vaguely reported by accountants, it is necessary to adjust or normalize it in a consistent manner.

Fundamental analysts find it necessary to significantly alter the income statements, to obtain estimates for two reasons.

1. The accountant has used an accounting procedure, which is inappropriate for the relevant economic transaction and/or
2. The accountant, perhaps under the pressure of top management, has adopted a procedure to minimise the firm's income taxes or window dress the firm's financial statements.

We will now discuss the differences in accounting procedures. These are only illustrative of the controversy in reporting incomes.

1. ***Sales – Revenue Recognition Principle:*** Sales can be either cash sales or credit sales. Sales can be recognized as early as the date the sale order is signed. However, in the case of long-term construction contracts the sale may not be recognized until as late as the day the cash is fully paid. Between these two extremes, the accountant may choose a suitable time point to recognize the sales revenue in the financial statements. He may do it either in an attempt to improve current income or because he has grown confident about its collectability. In the case of credit sales, companies may factor their accounts receivable and realize cash proceeds. One firm may recognize this immediately, whereas another firm may wait until the customer's final cash payment is actually received.

Notes

2. ***Inventory:***

   Inventory valuation is done based on two methods:

   FIFO – First in, first out method

   LIFO – Last in, first out method

3. ***Depreciation:*** Several depreciation methods may be used in financial statements that a firm to the public.

   (a) Straight line method

   (b) Sum-of-digit method

   (c) Double declining balance method

   (d) Units of production method

The second and third methods are accelerated methods of deprecation. The second method may be used to accelerate depreciation during a period of rapid production.

9.2.2 Accounting Income Effect on Balance Sheet

A balance sheet is a summary of account balance carried after the appropriate closing of the books. Income statements deal with flows, whereas balance sheet deals with stocks. Since stocks are accumulations of flows, vagaries that undermine the estimates of accounting income are cumulated in certain sheet items.

For instance, the impact of inflation should be considered to make the balance sheet items realistic. Measures suggested are:

1. ***Assets side:***

   (a) Report marketable securities at current value.

   (b) Inventory should be valued at replacement cost.

   (c) Land and natural resources to be shown at net realizable value (current market price-future development, selling or interest costs.

   (d) Plant & machinery at replacement cost.

   (e) Goodwill

   (f) R & D expenses

2. ***Liabilities side:***

   (a) Debt. In future, at the time of maturity it is repaid in cheaper money units (rupees). It is a gain to shareholders.

   (b) Deferred taxes.

   (c) Retained earnings.

9.2.3 Forecasting Earnings

It is necessary to estimate a stock's future income because the value of the share is the present value of its future income. This can be done by focussing on:

1. ***Identification of variables:*** Basically changes in income result from changes in:

   (a) *Operations and Earnings:* The operating cycle of a firm starts with cash converted into inventory. Inventory turns into sale and accounts receivables, which finally become cash.

Notes

Return on investment (ROI) is the measure of the firm's operating result.

$$ROI = \frac{EBIT}{Investment} = \frac{EBIT}{Sales} \times \frac{Sales}{Investment}$$

There are two products:

(i) Profit margins on sale and

(ii) Turnover of assets

(b) *Financing and Earnings:* The two main sources of financing an enterprise are:

(i) Borrowings

(ii) Issue of new shares.

Debt financing provides leverage to common shareholders. It raised the earnings per share but also risk. Equity financing is advisable where new shares can be sold at a price in excess of asset value per share, as it improves EPS. This is possible only when the company management can maintain a reasonably higher ROI.

From the above, it is clear that EPS and changes in earnings are function of:

i. Turnover of investment

ii. Margin on sales

iii. Effective interest rate (cost of borrowed funds)

iv. Debt equity ratio

v. Equity base

vi. Effective tax rate.

2. ***Determining the extent of change method:*** Different methods of forecasting earnings are available. The two categories into which the methods fall are given below with a brief list of some of the methods.

(a) *Earlier methods*

i. Earnings methods

ii. Market share/profit margin approach (breakeven analysis)

(b) Modern techniques

i. Regression and correlation analysis

ii. Trend analysis (time series analysis)

iii. Decision trees

iv. Simulation

The methods are briefly explained in the following sections:

(i) ***Earnings model:*** The ROI method which has been earlier introduced as a device for analyzing the effects of and interaction between the earnings and assets can be used as a forecasting tool. If predicted data relating to assets, operating income, interest, depreciation and forces are available the new values can be substituted in the model and EAT can be forecasted.

Notes

(ii) ***Market share/profit margin approach:*** This is derivative of industry forecast of market. Once the total market is known, the market share of the individual company can be determined either using historical tract second or subjective probabilities. The next step is estimating net income after taxes and dividends. This can be done by cost analysis and estimates in relation to quantity of sales or operating capacity. Breakeven analysis is the appropriate tool to carry out such an analysis.

(iii) ***Projected financial statement:*** This method makes an item-wise analysis of revenues and expenses and predicts them over a number of years, based on the variations in the key determining variables. It is possible only when the forecaster has through information about the inner working of the company.

Notes A simplified approach involves consideration of branch/divisional total in place of item-wise amounts.

The above three approaches are not mutually exclusive. They are not without shortcomings. They are based on subjective evaluations made at various stages of the analysis.

(iv) ***Regression and correlation analysis:*** These methods as applicable to industry analysis can be used at company level. The methods permit analyzing the relationships between several variables of company, industry and economy to develop more accurate forecasts.

Because of the facility of considering many variables and analysing them, this method is more advantageous.

(a) Analysts are forced to think through various problems of company and the various interrelationships, internal and external variables and company revenues and expenses.

(b) Analysts can clearly explain the causal variables of changes and improve the confidence in forecasts.

(v) ***Trend analysis:*** Trend analysis is a time series analysis that permits identification of seasonal, cyclical and erratic fluctuations of the variables under consideration over a time period. Analysts employ trends analysed by plotting the data on a special kind of graph paper, semi-logarithmic or semi-log paper, in order to reveal starkly different growth rates.

(vi) ***Decision trees:*** This can be used to forecast earnings and security values. Decision tree is an advanced technique because it considers possible outcomes with their probabilities and analyses them.

A decision tree contains branches, each one representing a possible outcome. Probabilities of the end points of the branches add up to 1.

The decision tree of security analysis starts with sale. If sales are expected at two levels, high and low, there will be two branches; on the other hand if medium level sales are included, there will be three branches. Each one indicates expected sales and their probabilities. For each sale branch, different levels of earnings expected can be given with their probabilities. Finally, for each of the earnings branch, different expected P/E ratios can be presented. Based on the data MPS can be calculated for each alternative course of events and outcomes.

(vii) ***Simulation:*** This method can be applied to forecast earnings and also security values. Simulation is a technique that systematically repeats the application of a rule or formula

Notes

to know outcomes indifferent situations. It answers the question – what happens to the outcome, if one or more variables influencing it change?

All that is to be done is to set up the formulae

For example, $EPS = \frac{\text{Sales} \times \text{Margin (\%)}}{\text{No. of shares outstanding}}$

$MPS = EPS \times P/E$

Now, data relating to variables viz., Sales, profit margin, number of shares outstanding and P/E ratio are generated along with their probability distributions as in the case of decision tree.

The formula is applied to compute MPS under varying conditions. Computer programming will help analyse security values rapidly and accurately.

Self Assessment

State whether the following statements are true or false:

5. The false economic value or extrinsic value of a share of common stock, like the value of bond or other assets, is equal to the present value of all cash flows from the asset.
6. The decision tree of security analysis ends with sale.
7. Trend analysis is a time series analysis that prohibits identification of seasonal, cyclical and erratic fluctuations of the variables under consideration over a time period.

9.3 Determining Earnings – Multiplier (P/E) Ratio

So far, the focus has been on determining Earnings Per Shares (EPS). This is to be translated into market price per share (MPS). As such, most of the fundamental security analysis work centres on determining the appropriate multiplier.

Research Findings: Bing carried out a survey of practitioners' stocks evaluation methods and found that several approaches were in vogue. He found that analysts (1) used time horizon from 1 to 3 years and (2) preferred to use several techniques in combinations. Seventy-five per cent of the analysts followed rules of thumb to normalize P/E ratios.

1. They compared current actual P/E with what they considered normal for the stock in question.
2. They compared price times estimated future earnings (1 to 3 years out) with what they considered normal for the stock in questions.
3. They compared the multiplier and growth or earnings of individual stocks with industry group multiple and earnings growth.

With and Kisor based on their study of a number of stocks, opined that differences in P/Es between stocks were due to projected earnings growth, expected dividend payout, and variation in rate of earnings growth or growth risk. Bower and Bower came up with similar conclusion.

They divided risk into marketability of stock, price variability, and conformity with market behaviour. Malkiel and Cragg found positive effect of earnings growth on P/E. They further found that dividend payout effect was not clear.

Notes

9.3.1 Dividend Discount Model of Valuation

In determination of the P/E ratio, the factors to be considered are

(a) ***Capitalization rate (k):*** Capitalization rates vary with the firm's risk-class and the prevailing market conditions. Three risk classes may be considered for analysis – high, medium and negligible. Based on market level and directions of change, markets can be classified as:

(i) *Normal market:* In which most securities prices are experiencing slow steady growth and the average price-earnings ratio is the low mid teens (13-18 times).

(ii) *Bear market:* When average earnings multipliers drop below 13 times, many market prices are deflated.

(iii) *Bull market:* When average earnings multipliers rise above approximately 18, many stocks are over-priced.

Since future expectations are influenced by past experience, a good way to estimate a firm's risk-class is to examine historical data. Capital Asset Pricing Model (CAPM) or Security Market Line (SML) depicts the risk return relationships based on historical data. It illustrates the positive relationship between assets, undiversifiable (as measured ROR) for the asset. The fundamental analyst can measure the risk of the company in recent periods, adjust it for anticipated changes and then us, these forecasted risk statistics to obtain capitalization rates. Also adjustment upward or downward is to be made in earnings multipliers in line with prevailing conditions, i.e., depressed or inflated.

(b) ***Growth rate (g):*** Next step is determination of growth rates of earnings. If payout ratio in constant, the multiplier is influenced by growth rate (g) conditions viz., zero growth, perpetual growth and temporary growth.

(c) ***Payout ratio (d/e):*** The effects of changes in dividend payout ratio (d/e) are direct and proportional, direct as can be observed from the P/E model. The EPS and DPS are not equal, for the reason some companies prefer a stable dividend policy and some others retain earnings and maintain low dividend pay out ratios. It implies that analysts have to study the history of dividends announcements by the firm to make proper prediction of future pay out ratios.

Empirical studies have produced the following relevant findings:

1. Companies seem to have a predetermined payout ratio that they appear to adhere to over the long run.
2. Dividends are raised only if corporate management feels that a new higher level of earnings can be supported in the future; and
3. Managements are extremely reluctant to cut the absolute monetary amount of cash dividends.

It gives price earrings ratios or various risk classes and various rates of dividends or earnings growth in normal market along with formulae for computing value of stocks.

9.3.2 Comparative P/E Approach

Comparative or relative valuation makes use of the average P/E of market or industry to determine the P/E for an individual stock. The procedure is as follows:

(i) Determine the market P/E using dividend discount model.

(ii) Determine the market pay back period based on earnings growth rate of market. (How many years it takes to obtain market P/E at the given growth factor?)

Notes

(iii) Assign P/E to the stock based on its growth rate and market payback period.

(iv) Make adjustments for dividend pay out ratio and earnings volatility.

(v) Find volume of stock by multiplying normal earnings with the determined P/E.

Self Assessment

Fill in the blanks:

8. ..... in P/Es between stocks were due to projected earnings growth, expected dividend payout, and variation in rate of earnings growth or growth risk.

9. ..... carried out a survey of practitioners' stocks evaluation methods and found that several approaches were in vogue.

9.4 Growth Stocks

Investors are interested in not only current dividends but also in future earnings through dividends and capital gains.

Characteristics of growth stocks: The following features help identify growth stocks:

(i) Substantial and steady growth in EPS

(ii) Low current DPS, because retained earnings are high and reinvested.

(iii) High returns on book value

(iv) Emphasis on R & D

(v) Diversification plans for strategic competitive advantage

(vi) Marketing competence and edge.

Benefits: Investment in growth stocks would benefit investors in many ways:

1. The market value goes up at a rate much faster than the rate of inflation.

2. Higher capital gains.

3. Long range tension free holding without any need for sell & buy operations and associated problems.

Valuation: The investor interested in growth shares can either employ (1) Comparative P/E ratios approach or (2) Dividend Discount model for valuation of the stocks.

9.4.1 Guidelines for Investment

The following guidelines will be helpful to investors interested in growth stocks:

1. Tuning is not very important, but with appropriate timing one may be able to pick up shares at the threshold of high growth rate.

2. Choice of stock should not be based on simple factor. Multiple criteria using different appraisal techniques may be employed.

3. It is better to diversify investment in growth stocks industry-wise. Because different industries grow at different by evening out differences.

4. One should hold the stock for more than five years to gain advantage.

Notes

9.4.2 Estimation of Future Price

Before attempting to discuss the approach that can be adopted for company level analysis, let us about the objective of investor and how it can be quantified. It is to reiterate the proposition that an investor looks for increasing his returns from the investment. Returns are composed of capital gains and a stream of income in the form of dividends. Assuming he has equity shares for a period of one year (known as holding period), i.e., he sells it at the end of the year, the total returns obtained by him would be equal to capital gains plus dividends received at the end of the year.

Where $R_t = (P_t - P_{t-1}) + D_t$

P_t = Price of the share at the end of the year

P_{t-1} = Price of the share at the beginning of the year

D_t = Dividend received at the end of the year

R_t = Return for the holding period, t

In order to calculate the return received by him on his original investment (i.e. purchase price), total should be divided by P_{t-1}. These are expressed in percentage terms and known as holding period yield. Thus,

$$\text{HRY (\%)} = \frac{(P_t - P_{t-1}) + D_t}{P_t - 1}$$

The above computation is quite simple as long as the value of the variables is available. In reality, however, the investor would know the beginning price of the share (called purchase price) as this is the price paid to buy the shares, but the price at the end of the year (i.e. selling price) as well as dividend income received would have to be estimated. This is where the problem lies. How to estimate the future price of the share as well as dividends? This becomes the main challenge. The series data relating to dividends paid by companies provide us useful clues in estimating the dividends likely to be declared by companies. There is, it seems, a dividends policy followed by most firms in general. Thus, an investor would be able to estimate dividend for the year with reasonable degree of accuracy under normal circumstances.

Did u know? It has been found the management is very conservative in increasing the amount of dividend paid to shareholders.

Managements generally do not increase the dividend unless this increase is sustainable in the long run. This is to avoid further cuts if need count of dividend, in actual practice, does not form large part of the total returns of the investor. It is an important constraint, as indicated above.

Estimation of future price of the share that contributes a major portion in the total returns of the investor is the problematic and is discussed in detail in the following section. In order to estimate future price of share, you may adopt two approaches, namely Quantitative analysis and attractive analysis. Let us elaborate each of the two approaches.

9.4.3 Quantitative Analysis

This approach helps us to provide a measure of future value of equity share based on quantitative factors. The methods commonly used under this approach are:

- Dividend discounted method, and
- Price-earnings ratio method

Notes

Dividend Discounted Method

Dividend discounted method is based on the premise that the value of an investment is the present value, its future returns. The present value (PV) calculated by discounting the future returns, which are divided in the formula, thus, is

$$PV = \frac{D_1}{(1+K)} + \frac{D_2}{(1+K)^2} + \frac{D_3}{(1+K)^3} + \ldots\ldots \frac{D_t}{(1+K)^t}$$

Under the constant growth assumption, this boils down to

$$PV = \frac{D_t}{K-g}$$

K = Discount rate

g = Growth rate

$$DPS = EPS \times (1 - b)$$

DPS = Dividend Per Share

b = Proportion of earnings retained such that (1 – b) is the dividend payout

Substituting the above in the formula, it becomes

$$\frac{EPS\,(1-b)}{K-g}$$

On the basis of the above model, the following inferences can be drawn:

1. Higher the EPS, other things like b, k, g remaining the same, higher would be value of the share.
2. Higher the b, retention rate, or lower the 1–b i.e., g remaining the same, higher would be value of the share.
3. Higher the k, i.e. discount rate, other things like b, g remaining the same, higher would be value of a equity.
4. Higher the growth rate, other things like EPS, b, k remaining constant, higher would be value of the share.

These inferences clearly highlight the effect of different variables on the future price of equity shares.

Caution When applying this approach, one has to be careful about using discount rate k.

A higher value of discount could unnecessary reduce the value of share and equity, while a lower value unreasonably increase it; this will induce a complication to invest/disinvest the shares. A discount rate is based on the risk rate and risk premium. That is

Discount risk free rate + risk premium

$$K = r_1 + r_2$$

Where r_t = risk free rate of return

r_2 = risk premium

Notes

Thus, higher the risk free interest rate with rp remaining the same would increase the discount rate, which in turn would decrease the value of the equity. In the same way, higher risk premium with of remaining the same increase the overall discount rate and decrease the value of the equity. Like discount rate, growth equally critical variable in this method of share valuation. It may be pointed out that growth from internal of it depends on the amount of earnings retained and return on equity. Thus, higher is the retention rate, highly be the value of the firm, other things remaining constant.

Price Earnings Approach

According to this method, the future price of an equity share is calculated by multiplying the P/E ratio by the price. Thus,

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

The P/E ratio or multiple is an important ratio frequently used by analyst in determining the value of an equity share. It is frequently reported in the financial press and widely quoted in the investment community. In India, we can gauge its popularity by looking at various financial magazines and newspapers.

This approach seems quite straight and simple. There are, however, important problems with respect calculation of both P/E ratio and EPS. Pertinent questions often asked are:

- How to calculate the P/E ratio?
- What is the normal P/E ratio?
- What determines P/E ratio?
- How to relate company P/E ratio to market P/E ratio?

The problems often confronted in calculating this ratio are: which of the earnings – past, present or future to be taken into account in the denominator of this ratio? Likewise, which price should be put in the numerator ratio? These questions need to be answered while using this method.

Indeed, both these methods are inter-related. In fact, if we divide the equation of dividend discounted made under constant growth assumption by E_0 (Earnings per shares), we get

$$\frac{P_0/E_0 = D_0/E_0(1 + g)}{K - g}$$

Here $D_0(1 + g) - D_1$

Based on the above model, decision rules become:

- Higher the P/E ratio, other things remaining the same, higher would be the value of an equity share.
- Lower the P/E ratio, other things remaining the same, lower would be the value of an equity share.

Looking at the above decision rules, it is not uncommon to find that investor prefer shares of companies higher P/E multiple.

You will appreciate that the usefulness of the above model lies in understanding the various factors determine P/E ratio is broadly determined by:

- Dividend payout
- Growth

Notes

- Risk free rate
- Business risk
- Financial risk

Thus, other things remaining the same

1. Higher would be the P/E ratio, if higher is the growth rate or dividend or both
2. Lower would be P/E ratio, if higher is
   (a) Risk-free rate,
   (b) Business risk
   (c) Financial risk

The foregoing presentation helps us provide a quantity measure of the value of equity share. However, there remains the problem of estimating earning per share, which has been used in both the methods discussed. This is a key number, which is being quoted, reported and used most often by company management analysts, financial press etc. It is this number everybody is attempting to forecast. The starting point to earnings per share, however, is to understand the chemistry of earnings as described in the previous unit. We describe various approaches to forecast earnings per share in the following sections.

Self Assessment

State whether the following statements are true or false:

10. Investors are interested in not only current dividends but also in future earnings through dividends and capital gains.
11. Higher the P/E ratio, other things remaining the same, lower would be the value of an equity share.
12. Lower the P/E ratio, other things remaining the same, higher would be the value of an equity share.

9.5 Forecasting Earnings Per Share

Things are the most important number in the arsenal of the investor. The most important and the principal is getting information about the earnings of the company is its financial statements. The analyst must remember the fact that there is more to the financial statements than what meets his eyes. Out of the two statements, balance sheet and income statement, it is the income statement that is more often used in order to gauge the future state of the firm. Research studies have indicated the significance of this number in influencing prices and dividends. The research study conducted by Niederhoffer and Regan for example, found that the prices are strongly dependent on the changes in the earnings, both absolute and relative to the analysis.

The above study and some others indicate the importance of the forecast of earnings as the most important variable to work on in the investment decision-making process. The critical aspects of the earnings are its level, trend and stability.

There are various methods employed to assess the future outlook of the revenue, expenses and the earnings from given the economic and industry outlook. These methods can be broadly classified into two categories, traditional and modern. Under the traditional approach, the forecaster obtains the estimate of the single value variable. While in the case of modern approach, he obtains the range of values with the probability of each.

Notes

Beginning the discussion on the forecasting techniques, it will not be out of place to briefly mention that the earnings per share are measured from the financial statement. This will provide us an understanding of its changes. Broadly, changes in earnings are affected by operating and financing decisions. Both these decisions are, however, interdependent. Various companies do this by presenting the information in the income statement reflecting both types of decisions. Given below is the format, which analyses:

Income Statement for the year ended……..

1. Sales revenue
2. Less interest expenses
3. Earnings Before Interest and Tax (EBIT)
4. Less Interest Expenses
5. Earnings Before Tax (EBT)
6. Number of shares outstanding
7. Earning After Tax (EAT)
8. Number of shares outstanding
9. EPS = EAT/number of shares outstanding

Task Discuss the Forecasting earning per share with examples.

Self Assessment

Fill in the blanks:

13. The most important and the principal is getting information about the earnings of the company is its ……
14. The research study conducted by Niederhoffer and Regan found that the prices are strongly dependent on the changes in the ……..
15. Various methods employed to assess the future outlook of the revenue, expenses and the earnings from given the economic and industry outlook can be broadly classified into two categories, …… and ……..

Case Study

Beta Management Company

In early January 1991, Sarah Wolfe was in her office considering new goals and directions for her company forth coming year. Ms. Wolfe was the founder and CEO of the Beta Management Group, a small investment management company based in a Boston suburb. She dealt with a growing number of high-net-worth individual clients and had $25 million in assets under management. Beta's investment success during the past year had brought in a steady stream of new clients and additional money from existing clients. At the same time, Ms. Wolfe had inquiries from some small institutions, and was hoping to expand her business in 1991.

Contd...

Notes

Beta Management Company was founded in 1988. A wealthy couple had become fed up with their investment losses stemming from the October 1987 crash and had asked their friend, Ms. Wolfe, to manage a portion of their money. While business was slow at first, she gradually developed a client base through good performance and word of mouth. She considered herself a market strategist, and Beta Management's stated goals were to enhance returns but reduce risks for clients via market timing. Given the small size of her accounts, the easiest way for her to maintain and adjust equity market exposure was to "index". She would keep a majority of Beta's funds in no-load, low-expense index funds (with the remainder in money market instruments), adjusting the level of market exposure between 50% and 99% of Beta's funds in an attempt to "time the market." She had toyed with using a few different index funds at first, but soon settled on exclusive use of Vanguard's Index 500 Trust due to its extremely low expense ratio and its success at closely matching the return on the S&P 500 Index.

While Beta's performance had lagged market returns in 1989, Ms. Wolfe had been quite successful in 1990. She had reduced Beta's equity position to 50% in June, partially missing a large two-month market decline (see Table 1). After nervously waiting out August and September, she began moving money back into the index fund. The report in front of her showed that as of January 4, 1991, Beta Management had 79.2% of its $25 million invested in the Vanguard fund; Beta had also made money for its clients during a down market year.

This success had brought in enough new money to double the size of Beta in under six months, allowing Ms. Wolfe to finally make the move to work full-time managing money. But she had lost some potential new clients who had thought it unusual that Beta Management used only an index mutual fund and picked none of its own stocks. Ms. Wolfe had felt this same resistance in conversations with a few of the potential institutional clients she was courting. As a result, one of her New Year's resolutions had been to begin looking at some individual stocks for possible purchase for Beta's equity portfolio. She would focus on smaller stocks, since she didn't want to compete with Beta's equity portfolio. She would focus on smaller stocks, since she didn't want to compete with larger, analyst-staffed funds on their own turf, and also because she already had exposure to the S&P 500 stocks through investment in the index fund. She also decided to increase the proportion of Beta's assets in equities, since she felt the market was still a good value and that 1991 would be a good year.

As a first step toward both of these goals, Ms. Wolfe was considering immediately increasing her equity exposure to 80% with the purchase of one of two stocks recommended by her newly hired analyst. Both were small NYSE-listed companies whose stock price had eroded over the past two years (see Table 1) to levels that seemed unreasonably low.

California R.E.I.T. was a real estate investment trust that made equity and mortgage investments in income-producing properties (retail building 57%; industrial 17%; offices 15%; apartments 11%) in Arizona (51%), California (30%), and Washington (19%). Its investments and stock price had been badly damaged by the "World Series" earthquake of 1989 and the downturn in California real estate values (see Table 1). Ms. Wolfe viewed it as a good value, but noticed that it was an extremely volatile stock. Its stock price closed at $2 ¼ per share on January 4, 1991.

Brown Group, Inc was one of the largest manufacturers and retailers of branded footwear, and had been undergoing a major restructuring program since 1989. Earnings dropped in 1989 but had stayed positive and steady; the stock price had dropped substantially in late 1989 and late 1990. Ms. Wolfe knew that some of Brown's many brand names – including Jordache, Naturalizer, and Buster Brown – would wear well during the current recession,

Contd...

Notes

and she like the steady cash flow and earnings. She noted, though, that Brown's stock price seemed quite variable and somewhat sensitive to movements in the stock market. Still, she felt it was an attractive opportunity at its January 4 price of $24.

Ms. Wolfe felt that now was the right time to begin her program of adding individual stock investments and increasing her equity position. A $200,000 purchase of one of these stocks would increase her total equity exposure to $20 million. Still, she had some doubts. She was quite worried about the variability in individual stocks in general, and these stocks in particular. After all, she had always promised her clients reasonable returns with a focus on keeping their exposure to risk under control. She noticed that these stocks both seemed to bounce around in price much more than the market (or the index fund), and she wondered if she was doing the right thing exposing her clients to these new risks.

Table 1: Investment Return Data

Month	Vanguard Index 500 Trust	California R.E.I.T.	Brown Group
1989 – January	7.32	-28.26	9.16
February	-2.47	-3.03	0.73
March	2.26	8.75	-0.29
April	5.18	-1.47	2.21
May	4.04	-1.49	-1.08
June	-0.59	-9.09	-0.65
July	9.01	10.67	2.22
August	1.86	-9.38	0
September	-0.4	10.34	1.88
October	-2.34	-14.38	-7.55
November	2.04	-14.81	-12.84
December	2.38	-4.35	-1.7
1990 – January	-6.72	-5.45	-15.21
February	1.27	5	7.61
March	2.61	9.52	1.11
April	-2.5	-0.87	-0.51
May	9.69	0	12.71
June	-0.69	4.55	3.32
July	-0.32	3.48	3.17
August	-9.03	0	-14.72
September	-4.89	-13.04	-1.91
October	-0.41	0	-12.5
November	6.44	1.5	17.26
December	2.72	-2.56	-8.53

Questions

1. Compute the standard deviation of the stock returns of California REIT and Brown Group during the past 2 years.

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Notes

2. Suppose that Beta's position had been 99% of equity funds invested in the index fund, and 1% in the individual stock. Calculated the standard deviation of this portfolio using each stock. How does each stock affect the variability of the equity investment?
3. Based on your answers to questions 1 and 2, which stock is riskiest?
4. Regress each stock's monthly returns on the Index returns to compute the "beta" for each stock. Relate your answer to question 3.
5. What do you think about the move to a more active stock-picking strategy?

Source: http://brainmass.com/economics/finance/23762

9.6 Summary

- We have discussed the relevance of economy and industry analysis and how it is conducted. In this unit, we have discussed the company level analyses.
- For earning profits, investors apply a simple and common sense decision rule, that is, maximization.
- A careful examination of the company quantitative and qualitative fundamentals is, therefore, very essential.
- As Fischer and Jordan have aptly put it: "If the economic outlook suggests purchase at the time, the economic analysis of the industry analysis will aid the investor selecting their proper industry in which to invest. Nonetheless, when to invest and in which industry is not enough. It is also necessary to know which companies industries should be selected".

9.7 Keywords

Capital Asset Pricing Model: Capital Asset Pricing Model (CAPM) or Security Market Line (SML) depicts the risk return relationships based on historical data.

Dividend Discounted Method: Dividend discounted method is based on the premise that the value of an investment is the present value, its future returns.

External Information: External information comprises the reports and analyses made by sources outside the company viz. media and research agencies.

Internal Information: Internal information consists the data and events relating to the enterprise as publicized by it.

Price Earnings Approach: According to this method, the future price of an equity share is calculated by multiplying the P/E ratio by the price.

ROI Approach: Under this approach, attempts are made to relate the productivity of assets with the earnings and outcomes.

Simulation: This method can be applied to forecast earnings and also security values. Simulation is a technique that systematically repeats the application of a rule or formula to know outcomes indifferent situations.

Trend Analysis: Trend analysis is a time series analysis that permits identification of seasonal, cyclical and erratic fluctuations of the variables under consideration over a time period.

Notes

9.8 Review Questions

1. What is the need of company analysis? Do we need the company analysis? Illustrate your answer.
2. What is the framework of company analysis?
3. What are the two major components of company analysis?
4. Explain financial analysis.
5. What do you mean by earnings analysis?
6. Explain growth stocks.
7. What are the different types of ratios to analyse the company's earnings performance?

Answers: Self Assessment

1.	Trees	2.	Inference
3.	Analysis	4.	Asset
5.	False	6.	False
7.	False	8.	Differences
9.	Bing	10.	True
11.	False	12.	False
13.	financial statement	14.	earnings
15.	traditional, modern		

9.9 Further Readings

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Unit 10: Technical Analysis

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Objectives

After studying this unit, you will be able to:

- Explain the concept of technical analysis
- Discuss the difference between technical and fundamental analysis

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- Elaborate the old puzzles and new developments
- Discuss the neutral networks
- Describe the tools of technical analysis
- Explain the Dow Theory
- Discuss the criticisms of technical analysis

Introduction

The methods used to analyze securities and make investment decisions fall into two very broad categories: fundamental analysis and technical analysis. Fundamental analysis involves analyzing the characteristics of a company in order to estimate its value. Technical analysis takes a completely different approach; it doesn't care one bit about the 'value' of a company or a commodity. Technicians (sometimes called chartists) are only interested in the price movements in the market.

The term technical analysis is used to mean fairly wide range of techniques, all based on the concept that past information on prices and trading volume of stocks give the enlightened investor a picture of what lies ahead. It attempts to explain and forecast changes in security prices by studying only the market data rather than information about a company or its prospects as is done by fundamental analyst. John Magee, whose book Technical Analysis of Stock Trends is considered a classic for technical analysts, says:

"The technician has elected to study, not the mass of fundamentals, but certain abstractions, namely the market data alone. But this technical view provides a simplified and more comprehensible picture of what is happening to the price of a stock. It is like a shadow or reflection in which can be seen the broad outline of the whole situation. Furthermore, it works."

The technical analysts believe that the price of a stock depends on supply and demand in the marketplace and has little relationship to value, if any such concept even exits. Price is governed by basic economic and psychological inputs so numerous and complex that no individual can hope to understand and measure them correctly. The technician thinks that the only important information to work from is the picture given by price and volume statistics.

The technician sees the market, disregarding minor changes, moving in discernible trends, which continue for significant periods. A trend is believed to continue until there is definite information of a change. The past performance of a stock can then be harnessed to predict the future. The direction of price change is as important as the relative size of the change. With his various tools, the technician attempts to correctly catch changes in trend and take advantage of them.

10.1 Concept of Technical Analysis

Technical analysis is a method of evaluating securities by analyzing the statistics generated by market activity, such as past prices and volume. Technical analysts do not attempt to measure a security's intrinsic value, but instead use charts and other tools to identify patterns that can suggest future activity.

Just as there are many investment styles on the fundamental side, there are also many different types of technical traders. Some rely on chart patterns; others use technical indicators and oscillators, and most use some combination of the two. In any case, technical analysts' exclusive use of historical price and volume data is what separates them from their fundamental counterparts. Unlike fundamental analysts, technical analysts don't care whether a stock is undervalued – the only thing that matters is a security's past trading data and what information this data can provide about where the security might move in the future.

Notes

10.1.1 Basic Technical Assumptions

Before we embark on the actual methods themselves, let us review the basic and necessary assumptions regarding the technical analysis:

1. ***The Market Discounts Everything:*** A major criticism of technical analysis is that it only considers price movement, ignoring the fundamental factors of the company. However, technical analysis assumes that, at any given time, a stock's price reflects everything that has or could affect the company – including fundamental factors. Technical analysts believe that the company's fundamentals, along with broader economic factors and market psychology, are all priced into the stock, removing the need to actually consider these factors separately. This only leaves the analysis of price movement, which technical theory views as a product of the supply and demand for a particular stock in the market.
2. ***Price Moves in Trends:*** In technical analysis, price movements are believed to follow trends. This means that after a trend has been established, the future price movement is more likely to be in the same direction as the trend than to be against it. Most technical trading strategies are based on this assumption.
3. ***History Tends to Repeat Itself:*** Another important postulate in technical analysis is that history tends to repeat itself, mainly in terms of price movement. The repetitive nature of price movements is attributed to market psychology; in other words, market participants tend to provide a consistent reaction to similar market stimuli over time. Technical analysis uses chart patterns to analyze market movements and understand trends. Although many of these charts have been used for more than 100 years, they are still believed to be relevant because they illustrate patterns in price movements that often repeat themselves.

Technical analysis and fundamental analysis are the two main schools of thought in the financial markets. As we've mentioned, technical analysis looks at the price movement of a security and uses this data to predict its future price movements. Fundamental analysis, on the other hand, looks at economic factors, known as fundamentals. Let's get into the details of how these two approaches differ, the criticisms against technical analysis and how technical and fundamental analysis can be used together to analyze securities.

Self Assessment

Fill in the blanks:

1. …… analysis and fundamental analysis are the two main schools of thought in the financial markets.
2. Technical analysis uses chart patterns to analyze …… and understand trends.

Caselet

Tourism Trend Analysis

In an ever-changing, dynamic and volatile sector, tourism destination managers need to be continually adapting to the changing environment in their approach to destination management and strategies for destination development and marketing. Understanding current and forecast trends including economic, social, environmental trends and changing consumer behaviours is important in responding with an appropriate strategic approach. Identifying and assessing industry trends can be undertaken through visitor surveys, visitor profile and statistical research and global and national trend analysis.

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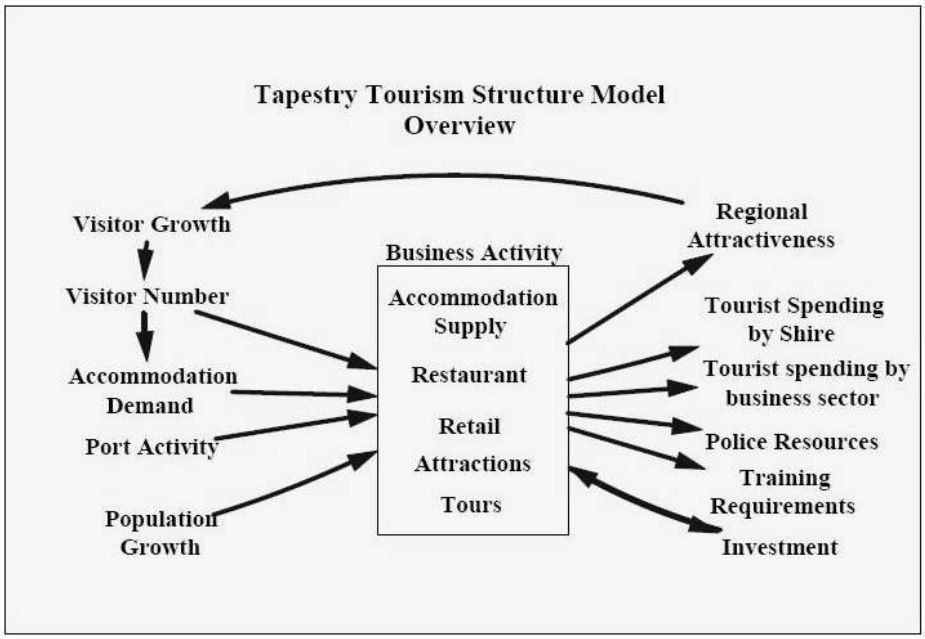
Tourism Forecasting

Tourism forecasting and modelling are important in identifying possible future trends that may affect the industry at a national or destination level. National level forecasts can provide high level insights into expected visitor numbers and growth, source markets and other potential market changes that may affect future planning for a destination or region. At a destination level, predicative modelling for tourism can help managers to identify potential issues, challenges and opportunities for the future development and management of tourism in a region. Predicative modelling can assist in testing possible tourism scenarios and their potential impact on the destination and its future planning and management.

There are a range of predictive modelling tools such as input-output analysis, computable general equilibrium models, tourism systems models and Geographical Information Systems that have been developed. The Tapestry Tourism Futures Model, developed by the Sustainable Tourism Cooperative Research Centre in the Regional Tourism Modelling report, is a tourism systems model approach to forecasting and scenario analysis. The Tapestry Model framework (as below), applied to the Tapestry region as a case study, assesses the impact that a growth in visitor numbers or population will have on expenditure, business activity and demand for infrastructure development and investment in the region. A similar model was also used in the Ningaloo Destination Modelling project undertaken by the STCRC.



Source: Walker et al, 2005 'Regional Tourism Modelling; The South West Tapestry', Sustainable Tourism Cooperative Research Centre

Source: http://www.sustainabletourismonline.com/destinations-and-communities/implementation/ongoing-management/forecasting-and-trend-analysis

10.2 Technical vs Fundamental Analysis

With a view to making a broad comparison between technical analysis and fundamental analysis, let us assume that the fundamentalist is a conservative who invests for the long-term and the technician is a trader who buys and sells for short-term profits. Actually, of course, the value of technical analysis lies between these extremes.

Notes

Fundamentalists study the cause, not the "should." They make their decisions on quality, value and depending on their specific investment goals, the yield or growth potential of the security. They are concerned with the basis, the corporation's financial strength, record of growth in sales and earnings, profitability, the investment acceptance and so on. They also take into account the general business and market conditions. Finally they interpret these data inductively to determine the current value of the stock and then to project its future price. Fundamentalists are patient and seldom expect meaningful profits in less than one year.

In the long run, the fundamentalist who selects quality stocks when they are undervalued and sells them when they become fully priced will make substantial profits. But as John Maynard Keynes often noted, "In the long run, we'll all be dead".

Compared with long-term investors, technicians seek to keep their money working as profitably as possible at all times. When trading, they want to score profits quickly, and if the stock to market does not perform as anticipated, they are willing to take a small, fast loss.

Technically-oriented investors start by checking the market action of the stock. If it is favourable, they examine the fundamentals to be sure the company is sound and profitable. At all times, their focus is on the market, generally, on the performance of all listed stocks; specifically, on the price/volume movements of the stock they are considering buying. They make their decisions based on technical, not fundamental, data.

Technicians believe that (1) the stock market is rooted 15% in economics and 85% in psychology; (2) The record of past and present performance of a stock, not necessarily of the corporation, is the key factor; and (3) stock market dominated by institutional investors, operates on the wolf pack theory of following leaders. When major money managers start to buy, regardless of the reason, the price of the stock will go up. When they start to sell, it will go down. All such moves are shown by technical indicators.

In more detailed terms, here are several ways the technician acts:

1. ***Technicians believe that behind the fundamentals are important factors:*** At any given time, some investors have gains in the stock, and some usually have losses. Those with gains want to safeguard them and if possible, build them higher, they will hold the stocks. Those with losses will adopt different tactics; some will cut their losses short by selling out early when the stock price begins to decline others will sell when a minor rally has moved the stock up to their cost price; and still others will hold on doggedly until there is a turnaround.

   Each of these decision points can be spotted on charts: current configuration to show the action of the past week or so; intermediate and long-term patterns to find the previous important price levels at which selling is likely; and interim and long-term high points from which the stock started to move down in the past. In this method of analysis, a vital factor is volume. Volume is favourable on the upside when the number of shares traded is greater than before and on the downside when the number of shares traded dwindles. Volume is unfavourable when volume dips as prices rise or increases when there is a decline. None of these indicators is concerned with the fundamentals of the corporation.

2. ***Technicians act on the what not the why:*** They recognize that formations and patterns signify changes in real value as the result of investor expectations, hopes, fears, industry developments and so on. They are not as impressed with fundamental value of any security as they are with current and prospective values reflected by market action.

3. ***Technicians are not committed to a buy-and-hold policy:*** As long as the trend is up, they will hold a stock. This may be for months or even years. But if there is a reversal, they will sell within hours of purchase. They recognize that, to achieve the greatest gains, they must

Notes

never let sentiment of emotion override facts (as shown by technical indicators) and should always get out of a situation which, on available evidence, is no longer profitable.

4. ***Technicians do not separate income from capital gains:*** They look for total returns, that is, the realized price less the price paid plus dividends received. This is in sharp contrast to most long-term investors who buy a high-dividend paying stock and hold it for years, through up-and-down fluctuations. To the technicians, such strategy is foolish. A stock may continue to pay liberally but lose 50% of its value. If a stock is to be judged solely on its income, a non-dividend payer would have no value at all.

5. ***Technicians act more quickly to make commitments and to take profits and losses:*** They are not concerned with maintaining a position in any market, any industry or any stock. As a result, they are willing to take smaller gains in an up-market and accept quick losses in a down market. Traders/technicians want to keep their money working at maximum efficiency. Technicians know that there is no real value to any stock and that price reflects supply and demand, which are governed by hundreds of factors, rational and irrational. No one can grasp and weigh them all, but to a surprising degree, the market does so automatically.

6. ***Technicians recognize that the more experience one has with the technical indicators, the more alert one becomes to pitfalls and failure of investing:*** To be rewarding, technical analysis requires attention and discipline, with quality stocks held for the long terms. The duration can make up for timing mistakes. With technical approaches, the errors become clear quickly.

7. ***Technicians insist that the market always repeats:*** What has happened before will probably be repeated again; therefore, current movements can be used for future projection. With all markets and almost all securities, there are cycles and trends which will occur again and again. Technical analyses, especially charts, provide the best and most convenient method of comparison.

8. ***Technicians believe that breakouts from previous trends are important signals:*** They indicate a shift in that all – important supply and demand. When confirmed, breakouts are almost always accurate signals to buy or sell.

9. ***Technicians recognize that the securities of a strong company are often weak and those of a weak company may be strong:*** Technical analysis can quickly show when such situations occur. These indicators always delineate between the company and the stock.

10. ***Technicians use charts to confirm fundamentals:*** When both agree, the odds are favourable for profitable movement if the trend of the overall stock market is also favourable.

In view of the above comparison between technical and fundamental analysis, let us consider some of the tools used by technical analysts to measure supply and demand and forecast security prices.

Table 10.1: Distinctions between Fundamental Analysis and Technical Analysis

S.No.	Fundamental	Technical
1.	His perspective is long-term in nature. He is conservative in his approach. He acts on 'What should be'.	His outlook is short-term oriented. He is aggressive. He acts on 'what is'.
2.	He adopts a buy-and hold policy. He does not usually expect any significant increase in the value of his investments in less than a year.	He believes in making a quick buck. He snuffles his investments quite often recognizing and foresees changes in stock prices.

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3.	He considers total gain from equity investment consists of current yield by way of dividends and long-term gains by way of capital appreciation.	He does not distinguish between current income and capital gains. He is interested in short-term profits.
4.	He forecasts stock prices on the basis of economic, industry and company statistics. The principal decision variables take the form of earnings and dividends. He makes a judgment of the stock's value with a risk-return.	He forecasts security prices by studying patterns of supply of and demand for securities. Technical analysis is study of stock exchange information.
5.	He uses tools of financial analysis and statistical forecasting techniques.	He uses mainly changes of financial variables besides some quantitative tools.

10.2.1 The Critics

Some critics see technical analysis as a form of black magic. Don't be surprised to see them question the validity of the discipline to the point where they mock its supporters. In fact, technical analysis has only recently begun to enjoy some mainstream credibility. While most analysts on Wall Street focus on the fundamental side, just about any major brokerage now employs technical analysts as well.

Much of the criticism of technical analysis has its roots in academic theory – specifically the Efficient Market Hypothesis (EMH). This theory says that the market's price is always the correct one – any past trading information is already reflected in the price of the stock and, therefore, any analysis to find undervalued securities is useless.

There are three versions of EMH. In the first, called weak form efficiency, all past price information is already included in the current price. According to weak form efficiency, technical analysis can't predict future movements because all past information have already been accounted for and, therefore, analyzing the stock's past price movements will provide no insight into its future movements. In the second, semi-strong form efficiency, fundamental analysis is also claimed to be of little use in finding investment opportunities. The third is strong form efficiency, which states that all information in the market are accounted for in a stock's price and neither technical nor fundamental analysis can provide investors with an edge. The vast majority of academics believe in at least the weak version of EMH. Therefore, from their point of view, if technical analysis works, market efficiency will be called into question.

10.2.2 Superiority of Technical Analysis

Technical analysts differ in their views about fundamental analysis. Those who depend exclusively on technical analysis, criticize fundamental analysis as follows:

- Fundamental analysis is hard and time consuming work. Technical analysis, on the other hand, requires less schooling and is easier to use.
- Fundamental analysis is based on inadequate income statements and highly subjective nature of earnings multipliers.
- Fundamental analysis is right in its assertion that security prices fluctuate around their intrinsic values. But even if a fundamental analyst does find an under-priced security, he must wait and hope that the rest of the market recognizes the security's true value and bids its price up.

Notes

Self Assessment

Fill in the blanks:

3. Technically-oriented ..... start by checking the market action of the stock.
4. Technical analysts differ in their views about ..... analysis.
5. Technicians believe that ..... from previous trends are important signals.

10.3 Old Puzzles and New Developments

Fibonacci numbers have intrigued mathematicians and scientists for hundred of years. Leonardo Fionacci (1170-1240) was a medieval mathematician who discovered the series of numbers while studying the reproductive behaviour of rabbits. The beginning of the Fibonacci series is shown below:

1,1,2,3,5,8,13,21,34,55,89,144,233,…….

After the initial pair of ones, each succeeding number is simply the sum of the previous two.

The remarkable thing about these numbers is the frequency with which they appear in the environment. Sunflowers have seeds spiralling around the centre of the plant. Some spirals contain seeds leaning counter-clockwise, with other spirals going the other way. On most sunflowers, the number of clockwise and counter-clockwise spirals is adjacent Fibonacci numbers. A blossom might have 34 counter-clockwise spirals and 55 clockwise spirals. The structure of pine cones, the number of chambers in a nautilus seashell, the topology of spiralling galaxies, and the ancestry of bees all reveal Fibonacci numbers. There is even a professional journal, the Fibonacci Quarterly, which devoted to the study of this series.

- Technical analysts who follow Fibonacci numbers usually make use of the number 1.613. This number is called the golden mean and appears in ancient writings and architecture. (The golden mean features prominently in the dimensions of the Parthenon). After the first ten or so numbers in the series, each Fibonacci number divided by its immediate predecessor equals 1.618. For example, 89/55 = 1.618, 144/89 = 1.61797, and so on. This magic number is used to calculate Fibonacci ratios as shown in Table 10.2.

Table 10.2: Fibonacci Ratios

0/618	1	0.618	1.000	1.618	2.618
-	-	X	X	X	X
1.618	1.618	1.618	1.618	1.618	1.618
0.382	0.618	1.000	1.618	2.618	4.236

- Many Fibonacci advocate in the investment business use the first two ratios, 0.382 and 0.618, to "compute retracement levels of a previous move." For instance, a stock that falls from ₹ 50 to ₹ 35 (a 30% drop) will encounter resistance to further advances after it recoups 38.2% of its loss (that is, after it rises to ₹ 40.73).
- Some technical analysts keep close-tabs on resistance and support levels as predicted by the Fibonacci ratios. Even people who do not subscribe to this business know that many other people do, and that when stock prices approach important Fibonacci levels, unusual things can occur.
- A male bee (a drone) has only a mother; it comes from an unfertilized egg. A female bee (a queen) comes from a fertilized egg and has both a mother and a father. This means one

drone has one parent, two grandparents, three great-grandparents, five great-great grandparents, and so on. The number of ancestors at each generation is the Fibonacci series.

10.3.1 Elliott Wave Principle

One theory that attempts to develop a rationale for a long-term pattern in the stock price movements is the Elliott Wave Principle (EWP), established in the 1930s by R. N. Eliott and later popularized by Hamilton Bolton. The EWP states that major moves take place in five successive steps resembling tidal waves. In a major bull market, the first move is upward, the second downward, the third upward, the fourth downward and the fifth and final phase upward. The waves have a reverse flow in a bear market.

10.3.2 Kondratev Wave Theory

Nikolay Kondratev was a Russian economist and statistician born in 1892. He helped develop the first Soviet Five-Year Plan. From 1920 to 1928 he was Director of the Study of Business Activity at the Timiriazev Agricultural Academy. While there, he devoted his attention to the study of Western capitalist economies. In the economies of Great Britain and the United States, he identified long-term business cycles with a period of 50-60 years. He became well-known after the US market crash of 1929, which Kondratev predicted would follow the US crash of 1870. His hypothesis of a long-term business cycle is called the Kondratev Wave Theory.

Notes The market crash for 1987 occurred 58 years after the crash of 1929, a period consistent with Kondratev's theory.

Some modern economists believe that Kondratev's theory has merits. Many others believe that significant macro-economic changes, such as floating exchange rates, the elimination of the gold standard, and the reduction of barriers to free trade, make the decision cycle less predictable. Still, many market analysts consider Kondratev's work in their assessment of the stock market and its risks.

10.3.3 Chaos Theory

At recent finance conferences, a few researchers have presented papers on the chaos theory and its application to the stock market. In physics, chaos theory is growing field of study examining instances in which apparently random behaviour is, in fact, quite systematic or even deterministic. Scientists apply this theory to weather prediction, population growth estimates, and fisheries biology.

- As an example of the latter application, a given volume of ocean water, left free from human interference, will not necessarily reach an equilibrium population of the various species that inhibit it. As fishes grow, they consume the smaller fry (of their own or a different species) in increasing numbers. Fewer younger fishes are left to mature; this, coupled with the natural death of the older fish, eventually results in a sudden drastic reduction in fish population, causing dismay to fishermen and excitement in the local media. At the same time, it results in reduced predation and competition for food among the surviving fry, so the population begins to grow dramatically, and the cycle continues. Interactions between species add complexity to the process.
- Investment analysts have sought a pattern in stock market behaviour since the origin of the exchanges. Much remains unknown about how security prices are determined, and

Notes

chaos theory may eventually provide some potential answers. If the apparent randomness of security price changes, can be shown to be non-random, much of the theory of finance would need revision.

Self Assessment

Fill in the blanks:

6. ……..... numbers have intrigued mathematicians and scientists for hundred of years.
7. Nikolay Kondratev was a ……..... economist and statistician born in 1892.

10.4 Neutral Networks

A neutral network is a trading system in which a forecasting model is trained to find desired output from past trading data. By repeatedly cycling through the data, the neutral network eventually learns the pattern that produces the desired output. If the desired output remains elusive, more data is included until a pattern is found. Neutral networks may also include a feedback mechanism whereby experience gained from past errors.

- This topic is a hot one in the investment community. National conferences have been organized dealing exclusively with this topic, and the trade literature publishes many articles upon this. A problem with concept of a neutral network is that the stock market is seldom deterministic. Situations constantly change, and what may have been true a few years ago will not necessarily prevail tomorrow. Financial academics are especially leery of back-tests, or research that tests a hypotheses using past data. Mining the data will almost always result in some apparent cause and effect between past events and stock market performance. Research that tests a hypothesis using subsequent data is much more useful. An article in the popular press describes Wall Street's response to this criticism.
- One way to get around this hazard is to build something called a genetic algorithm into your neutral network. A sexy term that currently causes Wall Street rocket scientists to swoon, genetic algorithms enable neutral nets to adapt to the future buy spawning schools of baby nets, each of which is sent to swim against the changing flow of data, where only the fittest survive to take over the role of the mother.
- No matter what someone's field of study, they are interested in the search for a better mousetrap. Essentially, what all security analysts seek to do is to find improvements in their methodology for security selection.

10.5 Tools of Technical Analysis

The technician must (1) identify the trend, (2) recognize when one trend comes to an end and prices set off in the opposite direction. His central problem is to distinguish between reversals within a trend and real changes in the trend itself. This problem of sorting out price changes is critical, since prices do not change in a smooth, uninterrupted fashion.

The two variables concerning groups of stocks or individual stocks are:

1. Behaviour of prices, and
2. Volume of trading contributing to and influenced by changing prices.

The use of technical 'indicators' to measure the direction of overall market should precede any technical analysis of individual stocks, because of systematic influence of the general market on stock prices. In addition, some technicians feel that forecasting aggregates a more reliable, since individual errors can be filtered out.

Notes

First, we will examine the seminal theory from which much of the substances of technical analysis have been developed – the Dow Theory – after which the key indicators viz., price and volume relating to entire market and individual stock performance as shown in Table 10.3 will be examined.

Table 10.3: Tools of Technical Analysis

Category	Market Indicators	Market and individual stock indicators
Price indicators	Dow Theory – Breadth of market indicators o Plurality o Market breadth index o Advance –Declines o New highs and new lows o The most active list o Confidence indicator (Disparity index)	Line, bar and point and figure charges Moving averages. Relative strength
Volume indicators	New York and American Exchange volume Contrary Opinion Theories o Short selling o Odd Lot trading	Resistance and support charts Price volume bar charts
Other indicators	Mutual fund activity Credit balance theory	

Self Assessment

Fill in the blanks:

8. A ……..…….. network is a trading system in which a forecasting model is trained to find desired output from past trading data.

9. Some ……..…….. feel that forecasting aggregates a more reliable, since individual errors can be filtered out.

10.6 Dow Theory

The Dow Theory is one of the oldest and most famous technical tools. It was originated by Charles Dow, who founded the Dow Jones company and was the editor of *The Wall Street Journal.* Charles Dow passed away in 1902.

The Dow Theory was developed by W.P. Hamilton and Robert Rhea from the editorial written by Dow during 1900-02. Numerous writers have altered, extended and in some cases abridged the original Dow Theory. It is the basis for many other techniques used by technical analysts.

The Dow Theory is credited with having forecast the Great Crash of 1929. On October 23, 1929, The Wall Street Journal published a still famous editorial "A Twin in the Tide" which correctly stated that the bull market was then over and a bear market had started. The horrendous market crash which followed the forecast drew much favourable attention to the Dow Theory. Greiner and Whitecombe assert that "The Dow Theory provides a time-tested method of reading the stock market barometer."

There are many versions of this theory, but essentially it consists of three types of market movements: the major market trend, which can often last a year or more; a secondary intermediate trend, which can move against the primary trend for one to several months; and minor

Notes

movements lasting only for hours to a few days. The determination of the major market trend is the most important decision for the Dow believer.

The Theory: According to Dow, "The market is always considered as having three movements, all going at the same time. The first is the narrow movement from day-to-day. The second is the short swing running from two weeks to a month or more, the third is the main movement covering at least four years in duration".

These movements are called:

- Daily fluctuations (minor trends)
- Secondary movements (trends), and
- Primary trends

The primary trends are the long range cycle that carries the entire market up or down (bull or bear markets). The secondary trend acts as a restraining force on the primary trend. It ends to correct deviations from its general boundaries. The minor trends have little analytical value, because of their short duration and variations in amplitude. Figure 10.1 represents the Dow Theory.

The Dow Theory is built upon the assertion that measures of stock prices tend to move together. It employs two of the Dow Jones' averages.

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

Accordingly, the terminologies used for the markets with respect to the averages are as follows:

- Bull market - If both the averages are rising
- Bear market - If both the averages are falling
- Uncertain - If one is rising and other is falling

Although Charles Dow believed in fundamental analysis, the Dow Theory has evolved into a primarily technical approach to the stock market. It asserts that stock prices demonstrate patterns over four to five years and these patterns are mirrored by indices of stock prices. The Dow Theory employs two of the Dow Jones' averages, the industrial average and the transportation average. The utility average is generally ignored.

The Dow Theory is built upon the assertion that measures of stock prices tend to move together. If the Dow Jones industrial average is rising, then the transportation average should also be rising. Such simultaneously price movements suggest a strong bull market. Conversely, a decline in both the industrial and transportation averages suggests a strong bear market, both move in opposite directions; the market is uncertain as to the direction of future stock prices.

If one of the averages starts to decline after a period of rising stock prices, then the two are at odds. For example, the industrial average may be rising while the transportation average is falling. This suggests that the industries may not continue to rise but may soon begin to fall. Hence, the market investor will use this signal to sell securities and convert to cash.

The converse occurs when after a period of falling security prices, one of the averages starts to rise while the other continues to fall. According to the Dow Theory, this divergence suggests that this phase is over and that security prices in general will soon start to rise. The astute investor will then purchase securities in anticipation of the price increase.

These signals are illustrated in Figure 10.1. Part A that illustrates a buy signal. Both the industrial and transportation average have been declining when the industrial starts to rise. Although the transportation index is still declining, the increase in industrial average suggests that the declining market is over. This change is then confirmed when the transportation average also starts to rise.

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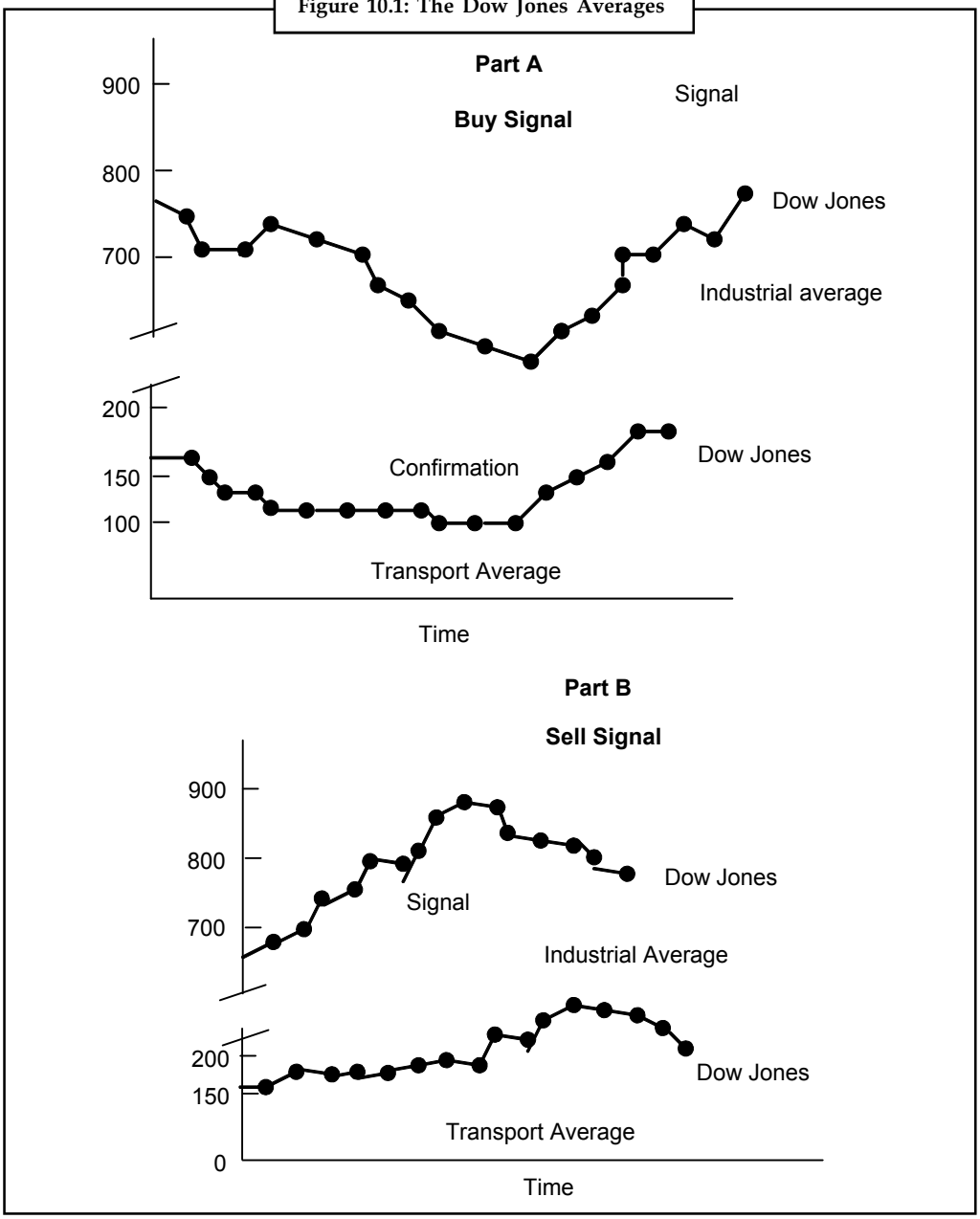
Figure 10.1: The Dow Jones Averages



10.6.1 Criticism of Dow Theory

Several criticisms are levelled against the Dow Theory.

1. It is not a theory but an interpretation of known data. A theory should be able to explain why a phenomenon occurs. No attempt was made by Dow or his followers to explain why the two averages should be able to forecast future stock prices.
2. It is not acceptable in its forecast. There was considerable lag between the actual turning points and those indicated by the forecast.
3. It has poor predictive power. According to Rosenberg, the Dow Theory could not forecast the bull market which had preceded the 1929 crash. It gave bearish indication in early

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1926. The 31/2 years which followed the forecast of Hamilton's editorials for the 26-year period, from 1904 to 1929. Of the 90 recommendations Hamilton made for a change in attitude towards the market (55% were bullish, 18% bearish and 29% doubtful) only 45 were correct. Such a result an investor may get by flipping a coin).

10.6.2 Price Indicators of Market

The different price indicators which measure market movement are briefly explained below:

1. ***Breadth of Market:*** Breadth-of-market indicators are used to determine what the main body of stocks is doing. It is computed by comparing market advances or declines. The technician is interested in change in breadth than in absolute level. Several methods are in vogue for measuring the breadth of the market. The most common ones are explained here.

   The breadth-of-market statistics are obtained by using the data of stock advances and declines. The data of advances and declines are published daily in most financial and national newspapers. Three simple methods are presented here:

   (i) *Plurality or Net Advances and Declines:* To get net advances or declines, subtract the number of issues whose prices declined from the number of issues whose prices advanced each day. Obtain cumulative index by adding daily net advances and declines.

   When the index +ve, market is bullish

   When the index -ve, market is bearish

   (ii) *Advance:* Decline ratio: a simple variant to the above method is computing a ratio.

   Advance - Decline ratio = no. of advances/no. of declines.

   When the ratio is > 1, market is bullish

   When the ratio is < 1, market is bearish

   (iii) *Market Breadth Index:* This is another way of computing the advance and declines

   $$\text{Market breadth index} = \frac{2(\text{advance} - \text{declines})}{\text{Unchanged}}$$

   The figure of each week is added to the next week. The data are then plotted to establish the patterns of movement of advances and declines.

   If both the stock index and market breadth index increase, the market is bullish.

   When the stock index increases but breadth index does not, the market is bearish.

   Iteratively, it can be emphasized that the technician is more interested in change in breadth. Further indexes are used along with stock market index. Normally, breadth and stock market index will move in unison. The key signals occur where there is divergence between the two. When they diverge, the advance decline line shows the direction of the market.

2. ***Price Indicators of Individual Stock:*** After the technical analysis has forecast the probable future performance of the market, he has focussed his attention on individual stock performance. The popular method of analyzing price changes of individual stocks are charts and moving averages.

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10.6.3 Types of Trend

There are three types of trend:

- Uptrends
- Downtrends
- Sideways/Horizontal Trends

As the names imply, when each successive peak and trough is higher, it's referred to as an upward trend. If the peaks and troughs are getting lower, it's a downtrend. When there is little movement up or down in the peaks and troughs, it's a sideways or horizontal trend. If you want to get really technical, you might even say that a sideways trend is actually not a trend on its own, but a lack of a well-defined trend in either direction. In any case, the market can really only trend in these three ways: up, down or nowhere.

10.6.4 Trend Lengths

Along with these three trend directions, there are three trend classifications. A trend of any direction can be classified as a long-term trend, intermediate trend or a short-term trend. In terms of the stock market, a major trend is generally categorized as one lasting longer than a year. An intermediate trend is considered to last between one and three months and a near-term trend is anything less than a month. A long-term trend is composed of several intermediate trends, which often move against the direction of the major trend. If the major trend is upward and there is a downward correction in price movement followed by a continuation of the uptrend, the correction is considered to be an intermediate trend. The short-term trends are components of both major and intermediate trends. Take a look a Figure 10.2 to get a sense of how these three trend lengths might look.

Figure 10.2: Trend Length

Caution When analyzing trends, it is important that the chart is constructed to best reflect the type of trend being analyzed.

To help identify long-term trends, weekly charts or daily charts spanning a five-year period are used by chartists to get a better idea of the long-term trend. Daily data charts are best used when analyzing both intermediate and short-term trends. It is also important to remember that the

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longer the trend, the more important it is; for example, a one-month trend is not as significant as a five-year trend.

10.6.5 Trendlines

A trendline is a simple charting technique that adds a line to a chart to represent the trend in the market or a stock. Drawing a trendline is as simple as drawing a straight line that follows a general trend. These lines are used to clearly show the trend and are also used in the identification of trend reversals.

10.6.6 Volume and Chart Patterns

The other use of volume is to confirm chart patterns. Patterns such as head and shoulders, triangles, flags and other price patterns can be confirmed with volume, a process which we'll describe in more detail later in this tutorial. In most chart patterns, there are several pivotal points that are vital to what the chart is able to convey to chartists. Basically, if the volume is not there to confirm the pivotal moments of a chart pattern, the quality of the signal formed by the pattern is weakened.

10.6.7 Volume Precedes Price

Another important idea in technical analysis is that price is preceded by volume. Volume is closely monitored by technicians and chartists to form ideas on upcoming trend reversals. If volume is starting to decrease in an uptrend, it is usually a sign that the upward run is about to end.

Now that we have a better understanding of some of the important factors of technical analysis, we can move on to charts, which help to identify trading opportunities in prices movements.

10.6.8 Technical Analysis: Chart Types

One school of though led by William L. Jiler developed a comprehensive technique called "Chart Reading". Charts provide visual assistance detecting the emerging and changing patterns and changing patterns of price behaviour. Technical analysts use following basic types of charts.

- Line Charts
- Bar Charts
- Point and Figure Charts
- Candle Stick Charts

Line Charts

The most basic of the four charts is the line chart because it represents only the closing prices over a set period of time. The line is formed by connecting the closing prices over the time frame. Line charts do not provide visual information of the trading range for the individual points such as the high, low and opening prices. However, the closing price is often considered to be the most important price in stock data compared to the high and low for the day and this is why it is the only value used in line charts.

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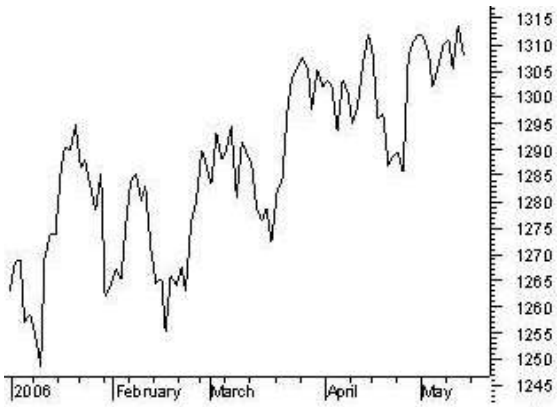
Figure 10.3: A Line Chart

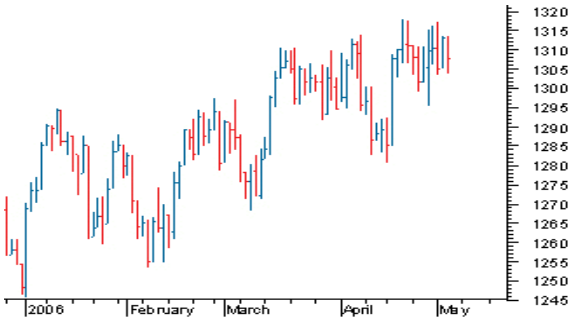


Bar Charts

Most investors interested in charting use bar charts - primarily because they have meanings familiar to a technical analyst, but also because these charts are easy to draw. The procedure for preparing a vertical line or bar chart is simple. Suppose an investor is to draw on graph on logarithmic paper a series of vertical lines, each line representing the price movements for a time period - a day, a week, or even a year.

The vertical dimensions of the line represent price; the horizontal dimension indicates the time involved by the chart as a whole. In a daily chart, for example, each vertical line represents the range of each day's price activity, and the chart as a whole may extend for a month. For this, extend the line on the graph paper from the highest transaction of each day drawn to the lowest and make a cross mark to indicate the closing price.

Figure 10.4: A Bar Chart



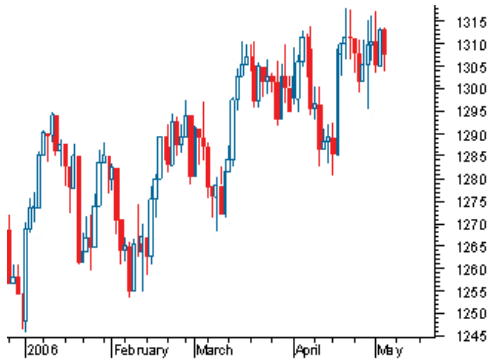
Candlestick Charts

Similar to the bar chart, the candlestick also has a thin vertical line showing the period's trading range. The difference comes in the formation of a wide bar on the vertical line, which illustrates the difference between the open and close. And, like bar charts, candlesticks also rely heavily on the use of colours to explain what has happened during the trading period. A major problem with the candlestick colour configuration, however, is that different sites use different standards; therefore, it is important to understand the candlestick configuration used at the chart site you are working with. There are two colour constructs for days up and one for days that the price falls. When the price of the stock is up and closes above the opening trade, the candlestick will usually be white or clear. If the stock has traded down for the period, then the candlestick will

Notes

usually be red or black, depending on the site. If the stock's price has closed above the previous day's close but below the day's open, the candlestick will be black or filled with the colour that is used to indicate an up day.

Figure 10.5: A Candlestick Chart

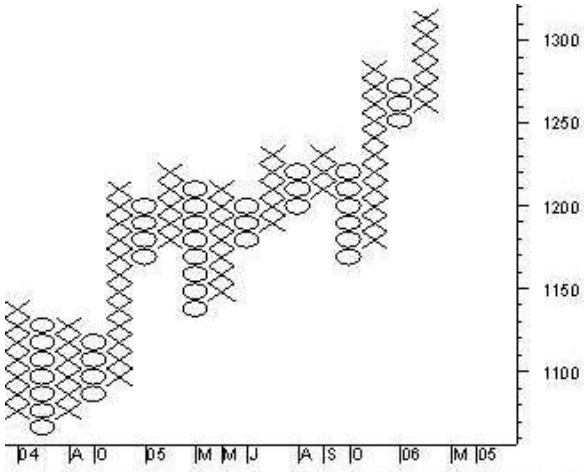


Did u know? The Candlestick chart is similar to a bar chart, but it differs in the way that it is visually constructed.

Point-and-Figure Charts

Bar chartists count on discovering certain buying and selling forces in the market, on the basis of which they predict future price trends. These forces consist of three factors-time, volume and price. Members of another school, known as the point-and-figure chartists, question the usefulness of the first two factors. They argue that the way to predict future price fluctuations is to analyze price changes only. Consequently, they assert, no volume action need be recorded, and the time dimension (day, week, or month) should also be ignored. If only significant price changes are important, then one need only capture the significant (say, one point or more, ignoring all fractions) price changes in a stock, no matter how long it takes for the stock to register this change.

Figure 10.6: A Point and Figure Chart



It is important that you clearly understand what is being shown on a chart and the information that it provides. Now that we have an idea of how charts are constructed, we can move on to the different types of chart patterns.

Self Assessment

Notes

Fill in the blanks:

10. The .....…….. Theory is one of the oldest and most famous technical tools.

11. .....…….. are one of the most fundamental aspects of technical analysis.

12. The market is always considered as having .....…….. movements, all going at the same time. The first is the narrow movement from day-to-day.

Notes Charts are one of the most fundamental aspects of technical analysis.

10.7 Criticisms of Technical Analysis

Despite the assertions of technical analysis, technical analysis is not a sure-fire method. The various limitations of technical analysis pointed out by its critics are as given below:

1. ***Difficult in interpretation:*** Technical analysis is not as simple as it appears to be. While the charts are fascinating to look at, interpreting them correctly is very difficult. It is always easy to interpret the charts long after the actual point of time. As such, fundamentals argue that charting techniques are no different from palmistry.

2. ***Frequent changes:*** With changes in market, chart patterns keep on changing. Accordingly, technical analysts change their opinions about a particular investment very frequently. One day they put up a buy signal. A couple of weeks later, they see a change pattern and put up a sell signal.

3. ***Unreliable changes:*** Changes in market behaviour observed and studied by technical analyst may not always be reliable owing to ignorance or intelligence or manipulative tendencies of some participants.

   A false piece of information or wrong judgment may result in trade at a lower than market price. If the technicians fail to wait for confirmation, they incur losses.

   With actively traded stocks, the prices may be the result of battle of wits and not the intrinsic worth. In the game of making money, two knowledgeable persons may engage in buying and selling every one hoping to make money at the expense of the others. In this game, many may lose, if they are not cleverer and luckier.

   The market prices of shares are sometimes the results of certain unhealthy practices like cornering and rigging of certain shares by some stock market operators.

4. ***Unpredictable changes:*** Technicians expect changes to take place in a known and gradual fashion.

   (a) *History does not repeat itself:* There is no guarantee that history repeats itself. Systems become more sophisticated and people become more mature, affecting a different pattern of behaviour. Further, unexpected events like a change of the government, or a violent agitation or a natural calamity may produce a different pattern of behaviour. This contingency is not taken into account in making projections.

   (b) *No gradual shifts:* It is presumed that shifts in supply and demand occur gradually rather than instantaneously. Since these shifts are expected to continue as the price

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gradually reacts to new or other factors the price change pattern is extrapolated to predict further price changes. However, economists asserted that this is a wrong proposition. Their random walk theory has shaken the conceptual foundation of technical analysis. They believe that securities price changes are a series of random numbers, which occur in reaction to the random arrival of news.

Caution One of the major limitations of technical analysis is that the entire data is based on the past. It is presumed that future resembles the past.

5. ***Less precise tools:*** The greatest limitation of technical analysis is perhaps the mechanical precision it gives to the entire exercise of investment in equity shares. However, the tools are subject to errors, breakdown and misinterpretation.

6. ***False signals can occur:*** Technical analysis is a signalling device. Like a thermometer, it may give a false indication when there is no alarm, but when there is cause for alarm, the signal will almost invariably be flashed.

7. ***No one indicator is infallible:*** Technical analysis includes many approaches, most requiring a good deal of subjective judgment in applications. A number of tests have been conducted to obtain statistically reliable estimates of the worth of various technical trading strategies. The results have been inconclusive because of different findings of different researchers using different procedures and different samples.

The hub of the problem as it applies to indicators is that while they may be crystal clear in definition and theory, they often break down in practice. Each one of them has at some particular time been ineffective, out-weighed by a number of other indicators.

Did u know? Technicians seldom rely upon a single indicator; they place reliance upon reinforcement provided by groups of indicators.

In conclusion, it can be said that technical analysis is essentially an imperfect science and an art. It helps those who have good skills, of course, not always.

10.7.1 The Future of Technical Analysis

Although there is much in finance that we do not completely understand, technical analysis has been around for more than 100 years, and it is not likely to disappear from the investment scene anytime soon. Improved quantitative methods coupled with improved behavioural research will continue to generate ideas for analysts to test. The well-known financial behaviourist Warner De Bont, for instance, recently reported substantial evidence that the public expects the continuation of past price trends. That is, they are bullish in bull markets and pessimistic in bear markets.

Perhaps within a decade or more, the fragmentation of technical analysis into such a wide-ranging array of increasingly complex, widely differing formulae will cause a gradual movement away from the entire quasi-science back to some form of more fundamental evaluation.

Task Prepare a short report on Technical Analysis.

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Self Assessment

Fill in the blanks:

13. Technical analysis is not as .....…… as it appears to be.

14. A number of tests have been conducted to obtain statistically reliable estimates of the worth of various technical .....…… strategies.

15. One of the major .....…… of technical analysis is that the entire data is based on the past.

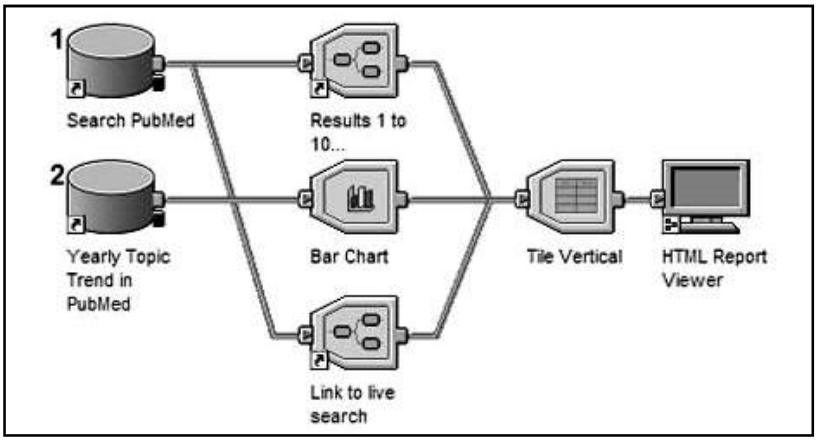
Case Study

PubMed Trend Analysis Using Pipeline Pilot

Keeping up to date with the explosion of published literature is virtually impossible these days. What are the hot topics and trends in science and industry? How are discoveries in one field of research impacting others, particularly yours? It's a catch-22 situation – you need to know what's going on in your field and related fields, but at the same time you need to be doing your own research. How can you most efficiently find the papers you need to read and keep abreast of developing fields of research? One way to help with this problem is to quickly and easily track trends and correlations in publications, for example to PubMed. These analyses can help reveal emerging topics and relationships in science, as well as those that are yesterday's news.

Trend Analysis

Trend and correlation analyses can be performed using the Text Analytics Collection (TAC) for Pipeline Pilot. TAC includes components dedicated for the search, retrieval, analysis and display of documents. To perform a trend analysis to PubMed, and show the results as a bar chart, set up a protocol similar to what is shown below:



The key here is the component labelled "Yearly Topic Trend in PubMed". This component takes a text query (i.e., the topic of interest) and a range of years as input and calculates the number of articles in PubMed matching that query each year. The component also calculates the total number of published articles for a given year, meaning that both raw counts for the topic of interest and the fraction of publications for that topic, compared with all publication, in a given year, can be computed.

The results can be visualized in a number of ways. The graphic below shows the results viewed in a bar chart, which is part of the Reporting Collection for Pipeline Pilot.

Contd...

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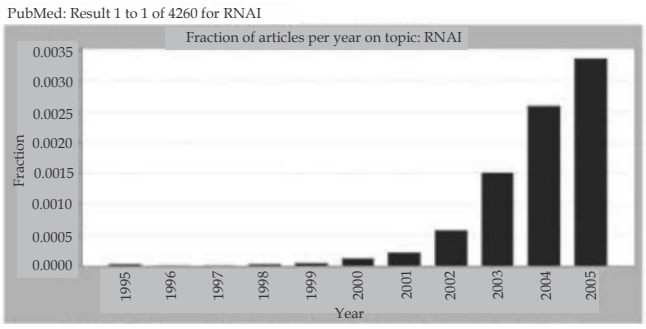
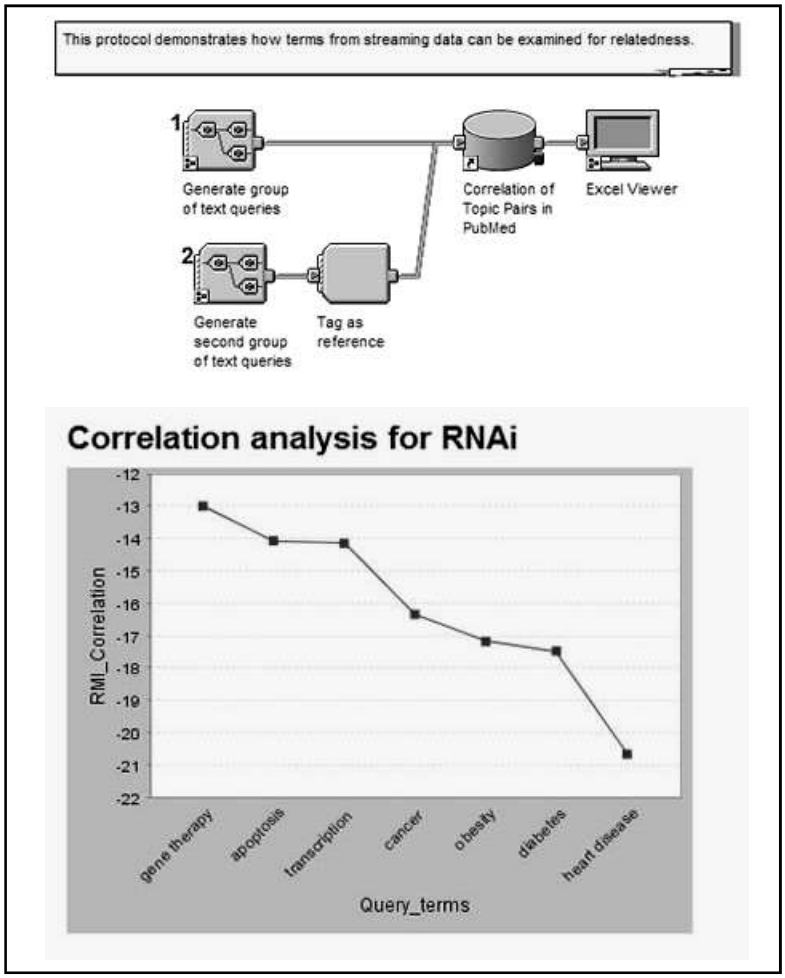


The graphic shows the tremendous increase in papers published about RNA interference, a technique for controlling and investigating biological processes, over the last five to six years.

Topic Correlation

A valuable complement to characterizing publication trends for individual topics is to compute the correlation between topics in the literature. A strong correlation occurs when a pair of topics is often mentioned in the same document, indicating a relationship between the topics. A weak correlation between topic pairs suggests that there is no relationship between them, or at least no recognized relationship.



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Extending Analyses

The Text Analytics Collection comes pre-packaged with components for performing trend and correlation analyses, which can be very valuable. However you may want to extend these analyses further, for example by performing a trend-correlation computation to look for changing correlations over time. With this type of analysis you can ask questions such as "what pairs of topics are becoming hot?" and survey the changing landscape of science and industry. This can point out areas of opportunity or, conversely, areas of tight competition.

One of the great strengths of Pipeline Pilot is the ability it offers you to customize your analyses. Unlike many other applications that limit you to only the pre-packaged analyses, Pipeline Pilot makes it straightforward to flexibly combine pre-packaged components into analysis pipelines to achieve the desired analysis.

Question

Discuss the topic correlation.

Source: http://accelrys.com/resource-center/case-studies/pubmed-trend-analysis.html

10.8 Summary

- The term technical analysis is used to mean a fairly wide range of techniques; all based on the concept that past information on prices and trading volume of stocks gives the enlightened investor a picture of what lies ahead.
- It attempts to explain and forecast changes in security prices by studying only the market data rather than information about a company or its prospects, as is done by fundamental analyst.
- Fundamentalists study the cause, not the 'should.' They make their decisions on quality, value and depending on their specific investment goals, the yield or growth potential of the security.
- Some critics see technical analysis as a form of black magic. Don't be surprised to see them question the validity of the discipline to the point where they mock its supporters. In fact, technical analysis has only recently begun to enjoy some mainstream credibility.
- While most analysts on Wall Street focus on the fundamental side, just about any major brokerage now employs technical analysts as well.
- The technician must (1) identify the trend, (2) recognize when one trend comes to an end and prices set off in the opposite direction.

10.9 Keywords

Dow Theory: According to Dow, "The market is always considered as having three movements, all going at the same time.

Elliott Wave Principle: The EWP states that major moves take place in five successive steps resembling tidal waves.

Fundamental Analysis: Fundamentalists study the cause, not the "should." They make their decisions on quality, value and depending on their specific investment goals, the yield or growth potential of the security.

Minor Trends: The minor trends have little analytical value, because of their short duration and variations in amplitude.

Notes

Neutral Network: A neutral network is a trading system in which a forecasting model is trained to find desired output from past trading data.

Primary Trends: The primary trends are the long range cycle that carries the entire market up or down (bull or bear markets).

Secondary Trend: The secondary trend acts as a restraining force on the primary trend. It ends to correct deviations from its general boundaries.

Technical Analysis: Technical analysis is a method of evaluating securities by analyzing the statistics generated by market activity, such as past prices and volume.

Trend/Line: A trendline is a simple charting technique that adds a line to a chart to represent the trend in the market or a stock.

10.10 Review Questions

1. Write a brief note on technical analysis and assumptions.
2. What is the difference between technical and fundamental analysis?
3. Write a note on the origin and development of technical analysis.
4. What are the techniques of technical analysis?
5. What do you mean by market indicators?
6. Write a short note on old puzzles and new developments: Fibonacci Numbers, The Dow Theory, Elliott Wave Principles; Kondratev Wave Theory, Chaos Theory, Neutral Networks.
7. What are the tools of technical analysis? Explain in detail.
8. Write a note on charting as a technical tool: types of charts and important chart patterns.
9. What do you mean by exponential moving average (EMA)?
10. Explain briefly linear weighted average.
11. Define and explain moving average convergence divergence (MACD).
12. Write a note on major uses of moving averages.
13. What are the technical analysis indicators and oscillators?
14. Define Aroon oscillator.
15. Write a note on relative strength index.
16. What are the limitations of charts and criticisms of technical analysis?

Answers: Self Assessment

1.	Technical	2.	Market Movements
3.	Investors	4.	Fundamental
5.	Breakout	6.	Fibonacci
7.	Russian	8.	Neutral
9.	Technicians	10.	Dow
11.	Charts	12.	Simple

13. simple
14. Trading
15. Limitation

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Unit 11: Introduction to Derivatives

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Objectives

After studying this unit, you will be able to:

- Explain the characteristics of derivatives
- Discuss the criteria for derivatives trading
- Elaborate the operators in the derivatives market
- Discuss the myths and realities about derivatives

Introduction

The emergence of the market for derivative products, most notably forwards, futures and options, can be traced back to the willingness of risk-averse economic agents to guard themselves against

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uncertainties arising out of fluctuations in asset prices. By their very nature, the financial markets are marked by a very high degree of volatility. Through the use of derivative products, it is possible to partially or fully transfer price risks by locking-in asset prices. As instruments of risk management, these generally do not influence the fluctuations in the underlying asset prices. However, by locking-in asset prices, derivative products minimize the impact of fluctuations in asset prices on the profitability and cash flow situation of risk-averse investors. Derivative products initially emerged, as hedging devices against fluctuations in commodity prices and commodity-linked derivatives remained the sole form of such products for almost three hundred years. The financial derivatives came into spotlight in post-1970 period due to growing instability in the financial markets. However, since their emergence, these products have become very popular and by 1990s, they accounted for about two-thirds of total transactions in derivative products. In recent years, the market for financial derivatives has grown tremendously both in terms of variety of instruments available, their complexity and also turnover. In the class of equity derivatives, futures and options on stock indices have gained more popularity than on individual stocks, especially among institutional investors, who are major users of index-linked derivatives.

Even small investors find these useful due to high correlation of the popular indices with various portfolios and ease of use. The lower costs associated with index derivatives vis-à-vis derivative products based on individual securities are another reason for their growing use.

The following factors have been driving the growth of financial derivatives:

1. Increased volatility in asset prices in financial markets.
2. Increased integration of national financial markets with the international markets.
3. Marked improvement in communication facilities and sharp decline in their costs.
4. Development of more sophisticated risk management tools, providing economic agents a wider choice of risk management strategies, and
5. Innovations in the derivatives markets, which optimally combine the risks and returns over a large number of financial assets, leading to higher returns, reduced risk as well as transactions costs as compared to individual financial assets.

Derivative is a product whose value is derived from the value of one or more basic variables, called bases (underlying asset, index, or reference rate), in a contractual manner. The underlying asset can be equity, foreign exchange, commodity or any other asset. For example, wheat farmers may wish to sell their harvest at a future date to eliminate the risk of a change in prices by that date. Such a transaction is an example of a derivative. The price of this derivative is driven by the spot price of wheat which is the 'underlying.'

In the Indian context, the Securities Contracts (Regulation) Act, 1956 (SC(R) A) defines "equity derivative" to include:

A security derived from a debt instrument, share, loan whether secured or unsecured, risk instrument or contract for differences or any other form of security.

A contract derives its value from the prices, or index of prices, of underlying securities.

11.1 Derivatives

The derivatives are securities under the SC(R) A and thus the regulatory framework under the SC(R) A governs the trading of derivatives.

According to the author, derivatives can be defined as:

Derivatives are those assets whose value is determined from the value of some underlying assets. The underlying asset may be equity, commodity or currency. The list of derivative assets is long.

Notes

Derivatives are the most modern financial instruments in hedging risk. The individuals and firms who wish to avoid or reduce risk can deal with the others who are willing to accept the risk for a price. A common place where such transactions take place is called the 'derivative market'. As the financial products commonly traded in the derivatives market are themselves not primary loans or securities, but can be used to change the risk characteristics of underlying asset or liability position, they are referred to as 'derivative financial instruments' or simply 'derivatives.' These instruments are so called because they derive their value from some underlying instrument and have no intrinsic value of their own. The world over, derivatives are a key part of the financial system.

Did u know? Forwards, futures, options, swaps, caps floor collar etc. are some of more commonly used derivatives.

11.1.1 Characteristics of Derivatives

The important characteristics of derivatives are as follows:

- Derivatives possess a combination of novel characteristics not found in any form of assets.
- It is comfortable to take a short position in derivatives than in other assets. An investor is said to have a short position in a derivatives product if he is obliged to deliver the underlying asset in specified future date.
- Derivatives traded on exchanges are liquid and involves the lowest possible transaction costs.
- Derivatives can be closely matched with specific portfolio requirements.
- The margin requirements for exchange-traded derivatives are relatively low, reflecting the relatively low level of credit-risk associated with the derivatives.
- Derivatives are traded globally having strong popularity in financial markets.
- Derivatives maintain a close relationship between their values and the values of underlying assets; the change in values of underlying assets will have effect on values of derivatives based on them.
- In a Treasury bond futures contract, the derivatives are straightforward.

11.1.2 Criteria for Derivatives Trading

In the derivatives market there shall be a two-level system of members viz., clearing members and non-clearing members. The clearing member takes the responsibility for settlement of trades on behalf of the non-clearing member. Thus, the clearing member acts as a guarantor for the non-clearing member. The clearing member shall have a minimum net worth of ₹ 300 lakh as per the SEBI's definition and shall made a deposit of ₹ 50 lakh with the Exchange/Clearing Corporation in the form of liquid assets such as cash. Fixed deposits pledged in the name of the exchange, or other securities.

11.1.3 Derivatives Market in India

The most notable development concerning the secondary segment of the Indian capital market is the introduction of derivatives trading in June 2000. The Securities Exchange Board of India (SEBI) approved derivatives trading based on futures contracts at both BSE and NSE in accordance with the rules/bye laws and regulations of the stock exchanges. Both BSE and NSE have made a beginning with equity derivatives with the introduction of stock index futures.

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Stock Index Futures contract allows for the buying and selling of the particular stock index for a specified price at a specified future date. Stock Index Futures, inter alia, help in overcoming the problem of asymmetries in information. Information asymmetry is mainly a problem in individual stocks as it is unlikely that a trader has market-wide private information. As such, the asymmetric information component is not likely to be present in a basket of stocks. This provides another rationale for trading in Stock Index Futures. Trading in index derivatives involves low transaction cost in comparison with trading in underlying individual stocks comprising the index. While the BSE introduced Stock Index Futures for S&P CNX Nifty comprising of 50 scrips.

Stock Index Futures in India are available with one month, two month and three month maturities. While derivatives trading based on the Sensitive Index (Sensex) commenced at the BSE on June 9, 2000, derivatives trading based on S&P CNX Nifty commenced at the NSE on June 12, 2000.

Did u know? SIF is the first attempt in the development of derivatives trading.

11.1.4 Exchange-Traded and Over-the-Counter Derivative Instruments

OTC (over-the-counter) contracts, such as forwards and swaps, are bilaterally negotiated between two parties. The terms of an OTC contract are flexible, and are often customized to fit the specific requirements of the user. OTC contracts have substantial credit risk, which is the risk that the counterparty that owes money defaults on the payment.

Notes In India, OTC derivatives are generally prohibited with some exceptions: those that are specifically allowed by the Reserve Bank of India (RBI) or, in the case of commodities (which are regulated by the Forward Markets Commission), those that trade informally in 'havala' or forwards markets.

An exchange-traded contract, such as a futures contract, has a standardized format that specifies the underlying asset to be delivered, the size of the contract, and the logistics of delivery. They trade on organized exchanges with prices determined by the interaction of many buyers and sellers. In India, two exchanges offer derivatives trading: the Bombay Stock Exchange (BSE) and the National Stock Exchange (NSE). However, NSE now accounts for virtually all exchange-traded derivatives in India, accounting for more than 99% of volume in 2003-2004. Contract performance is guaranteed by a clearinghouse, which is a wholly owned subsidiary of the NSE. Margin requirements and daily marking-to-market of futures positions substantially reduce the credit risk of exchange-traded contracts, relative to OTC contracts.

11.1.5 Development of Derivative Markets in India

Derivatives markets have been in existence in India in some form or other for a long time. In the area of commodities, the Bombay Cotton Trade Association started futures trading in 1875 and, by the early 1900s India had one of the world's largest futures industries. In 1952, the government banned cash settlement and options trading and derivatives trading shifted to informal forwards markets. In recent years, government policy has changed, allowing for an increased role for market-based pricing and less suspicion of derivatives trading. The ban on futures trading of many commodities was lifted starting in the early 2000s, and national electronic commodity exchanges were created.

In the equity markets, a system of trading called 'badla' involving some elements of forwards trading had been in existence for decades. However, the system led to a number of undesirable practices and it was prohibited off and on till the Securities and Derivatives OUP.

Notes

Volatility is measured as the yearly standard deviation of the daily exchange rate series. Exchange Board of India (SEBI) banned it for good in 2001. A series of reforms of the stock market between 1993 and 1996 paved the way for the development of exchange-traded equity derivatives markets in India. In 1993, the government created the NSE in collaboration with state-owned financial institutions. NSE improved the efficiency and transparency of the stock markets by offering a fully automated screen-based trading system and real-time price dissemination. In 1995, a prohibition on trading options was lifted. In 1996, the NSE sent a proposal to SEBI for listing exchange-traded derivatives. The report of the L.C. Gupta Committee, set up by SEBI, recommended a phased introduction of derivative products, and bi-level regulation (i.e., self-regulation by exchanges with SEBI providing a supervisory and advisory role). Another report, by the J. R. Verma Committee in 1998, worked out various operational details such as the margining systems. In 1999, the Securities Contracts (Regulation) Act of 1956, or SC(R)A, was amended so that derivatives could be declared 'securities.' This allowed the regulatory framework for trading securities to be extended to derivatives. The Act considers derivatives to be legal and valid, but only if they are traded on exchanges. Finally, a 30-year ban on forward trading was also lifted in 1999.

The economic liberalization of the early nineties facilitated the introduction of derivatives based on interest rates and foreign exchange. A system of market-determined exchange rates was adopted by India in March 1993. In August 1994, the rupee was made fully convertible on current account. These reforms allowed increased integration between domestic and international markets, and created a need to manage currency risk. The figure shows how the volatility of the exchange rate between the Indian rupee and the US dollar has increased since 1991. The easing of various restrictions on the free movement of interest rates resulted in the need to manage interest rate risk.

Self Assessment

Fill in the blanks:

1. ..... are those assets whose value is determined from the value of some underlying assets.
2. The underlying asset may be equity, commodity or .....
3. Derivatives are the most modern financial instruments in ..... risk.
4. The individuals and firms who wish to .....or reduce risk can deal with the others who are willing to ..... the risk for a price.
5. A common place where such transactions take place is called the .....

Caselet

Forward Contract Effect on U.S. Dollar

In October 2007 the pound hit a 26 year high over the U.S dollar and it was possible to achieve over 2 dollars to 1 pound. At the same time, Tim Montgomery, a software programmer from Sussex, was buying a boat from Florida. He had been out there a few times, had chosen his vessel and was waiting for the paperwork to come through so he could transfer the U.S Dollars for the purchase. Tim was obviously pleased that the exchange rate was as favourable as it had already saved him a further £4500 from the time he had made his initial enquiries.

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The days passed by and he had heard nothing. Then he received an email from the agent saying there was a problem with the boat as the previous owners were a divorced couple who were involved in a settlement agreement in which the boat was a part of. However he was assured the dispute would be resolved within two months.

He could pull out, but he was sure this was the boat he wanted, and didn't really want to go through the whole process again. The exchange rate was however showing signs of going against him, so he wanted to find some way of stopping the rate while it was favourable before transferring all of his money. After doing some research on the internet, Tim found a website called 'Currency Today' that suggested a possible solution. On his $100,000 boat purchase, he could put down £5000 now, and hold the exchange rate at 2.0 for two months.

Two months later, his boat finally became available and the paperwork was sent through. Tim paid the remaining £45,000 to the foreign exchange company and his $100,000 was immediately sent out to the U.S bank account the agent had specified. Two weeks later, at the port of Southampton, Tim met his new boat, saving himself a total of £6000 through a favourable Dollars exchange rate, and forward planning.

How to keep an eye on the exchange rate, without being there?

If you need to watch the market closely for an imminent transfer, you may have found it's not only an arduous task, attempting to will an uncontrollable market, but also time consuming and often impractical to fit into a working day. Fortunately, it's possible to call upon the expertise of a foreign exchange company, who will assign you a 'personal account manager'. This is basically someone who will watch the market for you, and act on your instruction for buying and selling any amount of foreign currency you need. They also have the ability to set a level in the market above where it may be currently (known as a limit order) or below where it is currently (known as a stop order), to either achieve a rate you want, or prevent you losing any more than you have to if the exchange rate falls.

Source: http://www.footballvillagespain.co.uk/buy-euros-pounds.htm

11.2 Development and Regulation of Derivative Markets in India

The SEBI Board in its meeting on June 24, 2002 considered some important issues relating to the derivative markets, including:

- Physical settlement of stock options and stock futures contracts.
- Review of the eligibility criteria of stocks on which derivative products are permitted.
- Use of sub-brokers in the derivative markets.
- Norms for use of derivatives by mutual funds.

The recommendations of the Advisory Committee on Derivatives on some of these issues were also placed before the SEBI Board. The Board desired that these issues be reconsidered by the Advisory Committee on Derivatives (ACD) and requested a detailed report on the aforesaid issues for the consideration of the Board.

In the meantime, several other important issues like the issue of minimum contract size, the segregation of the cash and derivative segments of the exchange and the surveillance issues in the derivatives market were also placed before the ACD for its consideration.

The Advisory Committee, therefore, decided to take this opportunity to present a comprehensive report on the development and regulation of derivative markets including a review of the recommendations of the L. C. Gupta Committee (LCGC).

Notes

Four years have elapsed since the LCGC Report of March 1998. During this period there have been several significant changes in the structure of the Indian capital markets which include, dematerialisation of shares, rolling settlement on a T+3 basis, client level and Value at Risk (VaR) based margining in both the derivative and cash markets and proposed demutualization of exchanges. Equity derivative markets have now been in existence for two years and the markets have grown in size and diversity of products. This, therefore, appears to be an appropriate time for a comprehensive review of the development and regulation of derivative markets.

11.2.1 Regulatory Objectives

It is inclined towards positive regulation designed to encourage healthy activity and behaviour. It has been guided by the following objectives:

1. ***Investor Protection:*** Attention needs to be given to the following four aspects:
   (i) *Fairness and transparency:* The trading rules should ensure that trading is conducted in a fair and transparent manner. Experience in other countries shows that in many cases, derivatives brokers/dealers failed to disclose potential risk to the clients. In this context, sales practices adopted by dealers for derivatives would require specific regulation. In some of the most widely reported mishaps in the derivatives market elsewhere, the underlying reason was inadequate internal control system at the user-firm itself, so that overall exposure was not controlled and the use of derivatives was for speculation rather than for risk hedging. These experiences provide useful lessons for us for designing regulations.
   (ii) *Safeguard for clients' moneys:* Moneys and securities deposited by clients with the trading members should not only be kept in a separate clients' account but should also not be attachable for meeting the broker's own debts. It should be ensured that trading by dealers on own account is totally segregated from that for clients.
   (iii) *Competent and honest service:* The eligibility criteria for trading members should be designed to encourage competent and qualified personnel so that investors/clients are served well. This makes it necessary to prescribe qualification for derivatives brokers/dealers and the sales persons appointed by them in terms of a knowledge base.
   (iv) *Market integrity:* The trading system should ensure that the market's integrity is safeguarded by minimising the possibility of defaults. This requires framing appropriate rules about capital adequacy, margins, clearing corporation, etc.
2. ***Quality of Markets:*** The concept of "quality of markets" goes well beyond market integrity and aims at enhancing important market qualities, such as cost-efficiency, price-continuity, and price-discovery. This is a much broader objective than market integrity.
3. ***Innovation:*** While curbing any undesirable tendencies, the regulatory framework should not stifle innovation which is the source of all economic progress, more so because financial derivatives represent a new rapidly developing area, aided by advancements in information technology.

11.2.2 Hedging

The term 'hedging' is fairly clear. It would cover derivative market positions that are designed to offset the potential losses from existing cash market positions. Some examples of this are as follows:

- An income fund has a large portfolio of bonds. This portfolio stands to make losses when interest rates go up. Hence, the fund may choose to short an interest rate futures product in order to offset this loss.

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- An income fund has a large portfolio of corporate bonds. This portfolio stands to make losses when credit spreads of these bonds degrade or when defaults take place. Hence, the fund may choose to buy credit derivatives, which pay when these events happen.
- Every equity portfolio has exposure to the market index. Hence, the fund may choose to sell index futures, or buy index put options, in order to reduce the losses that would take place in the event that the market index drops.
- The regulatory concerns are about (a) the effectiveness of the hedge and (b) its size.

'Hedging' a ₹ 1 billion equity portfolio with an average beta of 1.1 with a ₹ 1.3 billion short position in index futures is not an acceptable hedge because the over hedged position is equivalent to a naked short position in the future of ₹ 0.2 billion. Similarly, 'hedging' a diversified equity portfolio with an equal short position in a narrow sectoral index would not be acceptable because of the concern on effectiveness. A hedge of only that part of the portfolio that is invested in stocks belonging to the same sector of the sectoral index by an equal short position in the sectoral index futures would be acceptable.

'Hedging' an investment in a stock with a short position in another stocks' futures is not an acceptable hedge because of effectiveness concerns. This would be true even for merger arbitrage where long and short positions in two merging companies are combined to benefit from deviations of market prices from the swap ratio.

Hedging with options would be regarded as over-hedging if the notional value of the hedge exceeds the underlying position of the fund even if the option delta is less than the underlying position. For example, a ₹ 2 billion index put purchased at the money is not an acceptable hedge of a ₹ 1 billion, beta = 1.1 fund, though the option delta of approximately ₹ 1 billion is less than the underlying exposure of the fund of ₹ 1.1 billion.

Covered call writing is hedging if the effectiveness and size conditions are met. Again the size of the hedge in terms of notional value and not option delta must not exceed the underlying portfolio.

The position is more complicated if the option position includes long calls or short puts. The worst-case short exposure considering all possible expiration prices should meet the size condition.

11.2.3 Portfolio Rebalancing

The use of derivatives for portfolio rebalancing covers situations where a particular desired portfolio position can be achieved more efficiently or a lower cost using derivatives rather than cash market transactions. The basic idea is that the mutual fund has a fiduciary obligation to its unit holders to buy assets at the best possible price.

Thus if it is cheaper (after adjusting for cost of carry) to buy a stock future rather than the stock itself, the fund does have a fiduciary obligation to use stock futures unless there are other tangible or intangible disadvantages to using derivatives. Similarly, if a synthetic money market position created using calendar spreads is more attractive than a direct money market position (after adjusting for the credit worthiness of the clearing corporation), the fund would normally have a fiduciary obligation to use the calendar spread. If a fund can improve upon a buy-and-hold strategy by selling a stock or an index portfolio today, investing the proceeds in the money market, and having a locked-in price to buy it back at a future date, and then it would have a fiduciary obligation to do so.

11.2.4 Derivative Products

Derivative is a product/contract that does not have any value on its own i.e. it derives its value from some underlying.

Notes

Forward Contracts

- A forward contract is one to one bi-partite contract, to be performed in the future, at the terms decided today. (E.g. forward currency market in India).
- Forward contracts offer tremendous flexibility to the parties to design the contract in terms of the price, quantity, quality (in case of commodities), delivery time and place.
- Forward contracts suffer from poor liquidity and default risk.

Future Contracts

- Future contracts are organised/standardised contracts, which are traded on the exchanges.
- These contracts, being standardised and traded on the exchanges are very liquid in nature.
- In futures market, clearing corporation/ house provides the settlement guarantee.

Every futures contract is a forward contract. They:

- are entered into through exchange, traded on exchange and clearing corporation/house provides the settlement guarantee for trades
- are of standard quantity; standard quality (in case of commodities)
- have standard delivery time and place.

Table 11.1: Forward/Future Contracts

Features	Forward Contract	Future Contract
Operational Mechanism	Not traded on exchange	Traded on exchange
Contract Specifications	Differs from trade to trade.	Contracts are standardised contracts.
Counterparty Risk	Exists	Exists, but assumed by Clearing Corporation/ house.
Liquidation Profile	Poor liquidity as contracts are tailor-made contracts.	Very high Liquidity as contracts are standardised contracts.
Price Discovery	Poor; as markets are fragmented.	Better; as fragmented markets are brought to the common platform.

Options

Options are instruments whereby the right is given by the option seller to the option buyer to buy or sell a specific asset at a specific price on or before a specific date.

- ***Option Seller:*** One who gives/writes the option. He has an obligation to perform, in case option buyer desires to exercise his option.
- ***Option Buyer:*** One who buys the option. He has the right to exercise the option but no obligation.
- ***Call Option:*** Option to buy.
- ***Put Option:*** Option to sell.
- ***American Option:*** An option that can be exercised anytime on or before the expiry date.
- ***European Option:*** An option that can be exercised only on expiry date.
- ***Strike Price/Exercise Price:*** Price at which the option is to be exercised.

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- ***Expiration Date:*** Date on which the option expires.
- ***Exercise Date:*** Date on which the option gets exercised by the option holder/buyer.
- ***Option Premium:*** The price paid by the option buyer to the option seller for granting the option.

Introduction of futures in India

- The first derivative product to be introduced in the Indian securities market is going to be "INDEX FUTURES".
- In the world, first index futures were traded in the U.S. on Kansas City Board of Trade (KCBT) on Value Line Arithmetic Index (VLAI) in 1982.

Index Futures

- Index futures are the future contracts for which underlying is the cash market index.
- For example: BSE may launch a future contract on "BSE Sensitive Index" and NSE may launch a future contract on "S&P CNX NIFTY".

Frequently used terms in Index Futures market:

- ***Contract Size:*** The value of the contract at a specific level of index. It is index level multiplier.
- ***Multiplier:*** It is a predetermined value, used to arrive at the contract size. It is the price per index point.
- ***Tick Size:*** It is the minimum price difference between two quotes of similar nature.
- ***Contract Month:*** The month in which the contract will expire.
- ***Expiry Day:*** The last day on which the contract is available for trading.
- ***Open interest:*** Total outstanding long or short positions in the market at any specific point in time. As total long positions for market would be equal to total short positions, for calculation of open interest, only one side of the contracts is counted.
- ***Volume:*** No. of contracts traded during a specific period of time. During a day, during a week or during a month.
- ***Long position:*** Outstanding/unsettled purchase position at any point of time.
- ***Short position:*** Outstanding/unsettled sales position at any point of time.
- ***Open position:*** Outstanding/unsettled long or short position at any point of time.
- ***Physical delivery:*** Open position at the expiry of the contract is settled through delivery of the underlying. In futures market, delivery is low.
- ***Cash settlement:*** Open position at the expiry of the contract is settled in cash. These contracts are designated as cash settled contracts. Index Futures fall in this category.
- ***Alternative Delivery Procedure (ADP):*** Open position at the expiry of the contract is settled by two parties, one buyer and one seller, at the terms other than defined by the exchange. Worldwide, a significant portion of the energy and energy-related contracts (crude oil, heating and gasoline oil) are settled through Alternative Delivery Procedure.

Concept of Basis in Futures Market

- Basis is defined as the difference between cash and futures prices:

  Basis = Cash prices – Future prices.
- Basis can be either positive or negative (in index futures, basis generally is negative).

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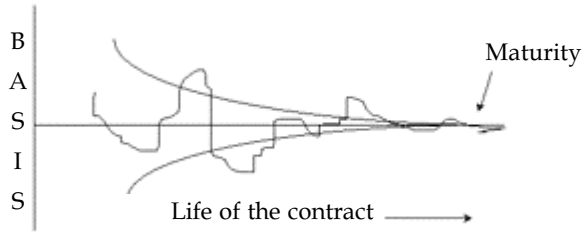
- Basis may change its sign several times during the life of the contract.
- Basis turns to zero at maturity of the futures contract i.e. both cash and future prices converge at maturity.

Figure 11.1: Concept of Basis in Futures Market



Self Assessment

State whether the following statements are true or false

6. The trading rules should ensure that trading is conducted in a fair and transparent manner.
7. Basis = Cash prices + Future prices.

11.3 Operators in the Derivatives Market

Hedgers: Operators, who want to transfer a risk component of their portfolio.

Speculators: Operators, who intentionally take the risk from hedgers in pursuit of profit.

Arbitrageurs: Operators who operate in the different markets simultaneously, in pursuit of profit and eliminate mispricing.

11.3.1 Pricing Futures

Cost and carry model of futures pricing:

Fair price = Spot price + Cost of carry – Inflows

- $FP_{tT} = CP_t + CP_t^* (R_{tT} - D_{tT})^* (T - t)/365$
- FP_{tT} - Fair price of the asset at time t for time T.
- CP_t - Cash price of the asset.
- R_{tT} - Interest rate at time t for the period up to T.
- D_{tT} - Inflows in terms of dividend or interest between t and T.
- Cost of carry = financing cost, storage cost and insurance cost.
- If futures price > fair price; buy in the cash market and simultaneously sell in the futures market.
- If futures price < fair price; sell in the cash market and simultaneously buy in the futures market.

This arbitrage between sash and futures markets will remain till prices in the sash and futures markets get aligned.

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11.3.2 Set of Assumptions

Set of Assumptions is described as follows:

- No seasonal demand and supply in the underlying asset.
- Storability of the underlying asset is not a problem.
- The underlying asset can be sold short.
- No transaction cost; no taxes.
- No margin requirements, and so the analysis relates to a forward contract, rather than a futures contract.

Self Assessment

Fill in the blanks:

8. ..... are operators, who want to transfer a risk component of their portfolio.
9. ..... are operators, who intentionally take the risk from hedgers in pursuit of profit.
10. ..... are operators who operate in the different markets simultaneously, in pursuit of profit and eliminate mispricing.

11.4 Myths and Realities about Derivatives

Numerous studies of derivatives activity have led to a broad consensus, both in the private and public sectors that derivatives provide numerous and substantial benefits to the users. Derivatives are a low-cost, effective method for users to hedge and manage their exposures to interest rates, commodity prices, or exchange rates.

Caution Derivatives increase speculation and do not serve any economic purpose.

The need for derivatives as hedging tool was felt first in the commodities market. Agricultural futures and options helped farmers and processors hedge against commodity price risk. After the fallout of Bretton Woods Agreement, the financial markets in the world started undergoing radical changes. This period is marked by remarkable innovations in the financial markets such as introduction of floating rates for the currencies, increased trading in variety of derivatives instruments, on-line trading in the capital markets, etc. As the complexity of instruments increased manifold, the accompanying risk factors grew in gigantic proportions. This situation led to development derivatives as effective risk management tools for the market participants.

Looking at the equity market, derivatives allow corporations and institutional investors to effectively manage their portfolios of assets and liabilities through instruments like stock index futures and options. An equity fund, for example, can reduce its exposure to the stock market quickly and at a relatively low cost without selling off part of its equity assets by using stock index futures or index options.

By providing investors and issuers with a wider array of tools for managing risks and raising capital, derivatives improve the allocation of credit and the sharing of risk in the global economy, lowering the cost of capital formation and stimulating economic growth. Now that global markets for trade and finance have become more integrated, derivatives have strengthened

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these important linkages between global markets, increasing market liquidity and efficiency and facilitating the flow of trade and finance.

11.4.1 Indian Market is not Ready for Derivative Trading

Often the argument put forth against derivatives trading is that the Indian capital market is not ready for derivatives trading. Here, we look into the prerequisites, which are needed for the introduction of derivatives and how Indian market fares:

Large market capitalization: India is one of the largest market-capitalized countries in Asia with a market capitalization of more than ₹ 765,000 crore.

High liquidity in the underlying: The daily average traded volume in Indian capital market today is around ₹ 7,500 crore. Which means on an average every month 14% of the country's market capitalization gets traded. These are clear indicators of high liquidity in the underlying.

Trade guarantee: The first clearing corporation guaranteeing trades have become fully functional from July 1996 in the form of National Securities Clearing Corporation Limited (NSCCL). NSCCL is responsible for guaranteeing all open positions on the National Stock Exchange (NSE) for which it does the clearing.

A strong depository: National Securities Depositories Limited (NSDL), which started functioning in the year 1997 has revolutionised the security settlement in our country.

A Good legal Guardian: In the Institution of SEBI (Securities and Exchange Board of India) today, the Indian capital market enjoys a strong, independent, and innovative legal guardian who is helping the market to evolve to a healthier place for trade practices.

Disasters prove that derivatives are very risky and highly leveraged instruments: Disasters can take place in any system. The 1992 security scam is a case in point. Disasters are not necessarily due to dealing in derivatives, but derivatives make headlines. Some of the reasons behind disasters related to derivatives are:

1. Lack of independent risk management.
2. Improper internal control mechanisms.
3. Problems in external monitoring done by Exchanges and Regulators.
4. Trader taking unauthorized positions.
5. Lack of transparency in the entire process.

Derivatives are complex and exotic instruments that Indian investors will have difficulty in understanding. Trading in standard derivatives such as forwards, futures and options is already prevalent in India and has a long history. The Reserve Bank of India allows forward trading in rupee-dollar forward contracts, which has become a liquid market. The Reserve Bank of India also allows cross-currency options trading.

The Forward Markets Commission has allowed trading in commodity forwards on commodities exchanges, which are called futures in international markets. Commodities futures in India are available in turmeric, black pepper, coffee, gur (jaggery), hessian, castor seed oil etc. There are plans to set up commodities futures exchanges in soya bean oil as also in cotton. International markets have also been allowed (dollar-denominated contracts) in certain commodities. The Reserve Bank of India also allows the users to hedge their portfolios through derivatives exchanges abroad. Detailed guidelines have been prescribed by the RBI for the purpose of getting approvals to hedge the user's exposure in international markets.

Derivatives in commodities markets have a long history. The first commodity futures exchange was set up in 1875 in Mumbai under the aegis of Bombay Cotton Traders Association (Dr. A. S.

Naik, 1968, Chairman, Forwards Markets Commission, India, 1963-68). A clearinghouse for clearing and settlement of these trades was set up in 1918. In oilseeds, a futures market was established in 1900. Wheat futures market began in Hapur in 1913. Futures market in raw jute was set up in Calcutta in 1912. Bullion futures market was set up in Mumbai in 1920.

History and existence of markets along with setting up of new markets prove that the concept of derivatives is not alien to India. In commodity markets, there is no resistance from the users or market participants to trade in commodity futures or foreign exchange markets. The Government of India has also been facilitating the setting up and operations of these markets in India by providing approvals and defining appropriate regulatory frameworks for their operations.

Approval for new exchanges in last six months by the Government of India also indicates that the Government of India does not consider this type of trading to be harmful, albeit within proper regulatory framework.

This amply proves that the concept of options and futures has been well-ingrained in the Indian equities market for a long time and is not alien as it is made out to be. Even today, complex strategies of options are being traded in many exchanges which are called teji-mandi, jota-phatak, bhav-bhav at different places in India. (Vohra and Bagari, 1998) In that sense, the derivatives are not new to India and are also currently prevalent in various markets including equities markets.

11.4.2 The Existing Capital Market is Safer than Derivatives

The world over, the spot markets in equities are operated on a principle of rolling settlement. In this kind of trading, if you trade on a particular day (T), you have to settle these trades on the third working day from the date of trading (T + 3).

Futures market allow you to trade for a period of say 1 month or 3 months and allow you to net the transaction taken place during the period for the settlement at the end of the period.

Notes In India, most of the stock exchanges allow the participants to trade during one-week period for settlement in the following week.

The trades are netted for the settlement for the entire one-week period. In that sense, the Indian markets are already operating the futures style settlement rather than cash markets prevalent internationally.

In this system, additionally, many exchanges also allow the forward trading called badla in Gujarati and Contango in English, which was prevalent in the UK. This system is prevalent currently in France in their monthly settlement markets. It allowed one to even further increase the time to settle for almost 3 months under the earlier regulations. This way, a curious mix of futures style settlement with facility to carry the settlement obligations forward creates discrepancies.

Task Pen down your views on portfolio rebalancing.

The more efficient way from the regulatory perspective will be to separate out the derivatives from the cash market i.e. introduce rolling settlement in all exchanges and at the same time allow futures and options to trade. This way, the regulators will also be able to regulate both the markets easily and it will provide more flexibility to the market participants.

Notes

In addition, the existing system, although futures style, does not ask for any margins from the clients. Given the volatility of the equities market in India, this system has become quite prone to systemic collapse. This was evident in the MS Shoes scandal. At the time of default taking place on the BSE, the defaulting member of the BSE Mr. Zaveri had a position close to ₹ 18 crore. However, due to the default, BSE had to stop trading for a period of three days. At the same time, the Barings Bank failed on the Singapore Monetary Exchange (SIMEX) for the exposure of more than US $ 20 billion (more than ₹ 84,000 crore) with a loss of approximately US $ 900 million (around ₹ 3,800 crore). Although, the exposure was so high and even the loss was also very big compared to the total exposure on MS Shoes for BSE of ₹ 18 crore, the SIMEX had taken so much margins that they did not stop trading for a single minute.

Self Assessment

State whether the following statements are true or false:

11. Derivatives decrease speculation and do not serve any economic purpose.
12. Numerous studies of derivatives activity have led to a broad consensus, both in the private and public sectors that derivatives provide numerous and substantial benefits to the users.
13. Derivatives are a high-cost, ineffective method for users to hedge and manage their exposures to interest rates, commodity prices, or exchange rates.
14. By providing investors and issuers with a wider array of tools for managing risks and raising capital, derivatives improve the allocation of credit and the sharing of risk in the global economy, lowering the cost of capital formation and stimulating economic growth.
15. Global markets for trade and finance have become more integrated.

Case Study

Airline Fuel Costs: Airlines Hedge Oil Exposures

01 July 2008

Colin Packham analyses whether derivatives are saving the airline industry from the soaring cost of oil

With oil prices increasing to new highs everyone is feeling the pinch. But, even more than most, the travel and transport industries are being dealt blow after blow as oil prices continue their upward trend. However, while the rising cost of fuel presents a danger to many in the industry, derivatives could come to the rescue.

But to what extent has the aviation industry embraced the use of derivatives to offset the oil market highs?

The Fundamentals

Oil has been the subject of record settlement highs throughout 2008, culminating in yet another peak reported on June 27 when New York Mercantile Exchange (Nymex)'s August WTI hit a record $142.26 a barrel before easing back to close at $141.64. Intercontinental Exchange (ICE) also recorded a new settlement high in its August Brent contract, which surged to $142.13 a barrel, before edging back to $141.10.

This rise in the price of oil has been nothing short of disastrous for the airline industry. Michael Waldron, oil markets analyst at Lehman Brothers says: "High oil prices are the number one enemy of airlines." Meanwhile, International Air Transport Association says the global airline industry may lose a record $6.1 billion this year.

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Indeed, United Airlines says its 2008 fuel bill is on schedule to hit $9.5 billion if current prices are sustained. This is more than $3.5 billion higher than last year. Chicago-based United and other airlines stress that they are under severe financial pressure.

"Since oil prices passed $135 a barrel, jet fuel costs have sent the whole airline industry reeling," says a United Airlines spokesman.

United says that 950 pilots, which constitutes about 14% of the total team, will lose their jobs as spiralling fuel costs, coupled with weak consumer spending, hit earnings.

The job cuts are in addition to existing plans to eliminate 1,600 positions from the firm's workforce. Staff numbers must be scaled back as United reduces the number of services it offers, says the company.

"As we take actions to enable United to compete in an environment of record fuel prices, we must take the difficult but necessary step to reduce the number of people we have to run our business," said the carrier.

However, United Airlines is not alone. Many carriers have made a series of radical moves to survive, including charging passengers to check in their first piece of luggage and raising the price of airfare tickets or fuel surcharges.

A number have already collapsed, including UK airline Silverjet and budget carrier Oasis Hong Kong, while Canada's leading airline, Air Canada, says it will cut 2,000 jobs by the end of the year as it reduces capacity to deal with rising fuel costs. Airline giant Intercontinental also announced 3,000 job cuts in June.

Michael O'Leary, chief executive of budget airline Ryanair, has also warned that most of Europe's airlines will go bust if oil prices remain high.

Derivatives – The Solution

The soaring price of oil has clearly taken its toll on the airline industry, but with such a danger to the market posed by a yet another potential rise in price, the risk management nature of derivatives may offer an escape from the pain.

"Airlines are definitely trying to minimize uncertainty and volatility," says Waldron.

Southwest Airlines is one such carrier trying to do all it can to offset the danger poised by the oil market. The airline says that it has a mixture of "extensive call options, collar structures and fixed price swaps" to decrease its exposure to jet fuel prices for more than 70% of its remaining 2008 jet fuel needs at an average crude oil equivalent price of about $51 per barrel.

The company says that it has derivative positions for more than 55% of its anticipated jet fuel needs for 2009, nearly 30% for 2010, over 15% for 2011 and more than 15% for 2012 at about $63 per barrel.

It is not just Southwest Airlines that is becoming fully versed in the benefits futures and OTC derivatives can offer. According to John Heimlich, chief economist at International Air Transport Association, France-KLM has hedged 75% of its fuel needs for 2008/2009, while British Airways has about 70% for March to June 2008 and Lufthansa locked in 85% for 2008. He said that others have been more modest in fuel hedging. For example, Spanish airline Iberia has hedged 48% of its fuel costs for 2008.

The differing levels of hedging may be explained by some airlines extending their traditional business areas and getting into a spot of trading themselves. One derivatives trader believes that some in the airline industry have been making money in oil trading, which might have been distracting them from their basic business.

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Notes

While the industry has differing levels of hedged exposure, at least the airline industry has awoken to the danger and the subsequent need to offset risk. However, one possible obstacle is the difficulty for airlines to find the appropriate exchange-traded contracts to manage their jet fuel exposure.

Southwest Airlines stated in its latest quarterly filing to US Securities and Exchange Commission: "Because jet fuel is not traded on an organized futures exchange, there are limited opportunities to hedge directly in jet fuel."

Yet all is not lost. The airline added: "We have found that financial derivative instruments in other commodities, such as crude oil and refined products such as heating oil and unleaded gasoline, can be useful in decreasing exposure to jet fuel price volatility."

Although the airline believes that the use of crude oil and other commodities allows them to hedge its oil market exposure, life may have just got a little tougher. After all, Commodity Futures Trading Commission (CFTC) has amended its no-action letter to ICE, which means that its European bourse will be subject to the same position limits as Nymex, after pressure from many prominent US politicians to curb oil market speculation.

"This powerful combination of enhanced trading data and additional market controls will help the CFTC in its surveillance of regulated domestic exchanges, while preserving the important benefits of our international recognition programme that has enabled proper global oversight during the last decade. This raises the bar for all future foreign access requests and will ensure uniform oversight of linked contracts," says CFTC acting chairman Walt Lukken. "These new conditions for foreign access will provide the CFTC with additional oversight tools to monitor linked contracts".

Exchange Innovation

While the trading on the crude oil contract may be slightly more difficult for the airlines, some exchanges are poised to launch jet fuel derivatives, allowing the industry the correct tools to offset risk.

Multi Commodity Exchange of India (MCX) is one such exchange set to launch Aviation Turbine Fuel (ATF) futures, providing Indian carriers a more effective mechanism to hedge spiralling prices. The move, which has received approval from the commodity market regulator Forward Markets Commission, will enable airlines to hedge fuel price on a domestic exchange, rather than an overseas one, as they do at present. With fuel costs accounting for about 10% of operating costs, the contract could provide significant cost savings for airlines in the country.

"This future trading, once allowed, shall be good news for both domestic airlines bogged down by steep ATF fuel bills and the passengers who are forced to pay a disproportionately higher fuel surcharge on their air tickets," says Nishant Joshi, senior associate at Armchand Mangaldas, a Delhi-based law firm.

Although airlines can hedge on foreign exchanges, there is a cap in place. Spice Jet hedges 10% of its fuel jet consumption on the Sing Kero exchange in Singapore. Jet fuel trading on MCX will therefore allow Indian carriers to increase substantially the amount they hedge.

ATF prices in India are 50% higher than international prices – making them among the highest in the world. But the launch of these AFT futures will take place after the Indian exchange studies the financial environment and finalizes a contract, which may take some time.

MCX, however, will not be alone in the market. Dubai Mercantile Exchange and Russian exchange, RTS, have also confirmed that they both intend launching jet fuel contracts.

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While the contracts have yet to materialize, the market is bracing itself, with one airline executive concluding that the market is "far more concerned with risk management than ever before".

Question

Discuss the solution for derivatives.

Source: http://www.fow.com/article/1973031/issue/26557/case-study-airline-fuel-costs-airlines-hedge-oil-exposures.html

11.5 Summary

- A derivative security is a financial contract whose value is derived from the value of something else, such as a stock price, a commodity price, an exchange rate, an interest rate, or even an index of prices.
- Derivatives may be traded for a variety of reasons. A derivative enables a trader to hedge some pre-existing risk by taking positions in derivatives markets that offset potential losses in the underlying or spot market.
- In India, most derivatives users describe themselves as hedgers (Fitch Ratings, 2004) and Indian laws generally require that derivatives be used for hedging purposes only.
- Another motive for derivatives trading is speculation (i.e. taking positions to profit from anticipated price movements). In practice, it may be difficult to distinguish whether a particular trade was for hedging or speculation, and active markets require the participation of both hedgers and speculators.
- A third type of trader, called arbitrageurs, profit from discrepancies in the relationship of spot and derivatives prices, and thereby help to keep markets efficient.
- Jogani and Fernandes (2003) describe India's long history in arbitrage trading, with line operators and traders arbitraging prices between exchanges located in different cities, and between two exchanges in the same city.

11.6 Keywords

Arbitrageurs: Operators who operate in the different markets simultaneously, in pursuit of profit and eliminate mispricing.

Derivative: Derivative is a product/contract that does not have any value on its own i.e. it derives its value from some underlying.

Forward Contract: A forward contract is one to one bi-partite contract, to be performed in the future, at the terms decided today.

Hedgers: Operators, who want to transfer a risk component of their portfolio.

***Hedging*:** 'Hedging' an investment in a stock with a short position in another stocks' futures is not an acceptable hedge because of effectiveness concerns.

OTC: OTC (over-the-counter) contracts, such as forwards and swaps, are bilaterally negotiated between two parties.

Portfolio Rebalancing: The use of derivatives for portfolio rebalancing covers situations where a particular desired portfolio position can be achieved more efficiently or a lower cost using derivatives rather than cash market transactions.

Speculators: Operators, who intentionally take the risk from hedgers in pursuit of profit.

Notes

11.7 Review Questions

1. Write a note on the derivatives market in India.
2. Explain clearing and settlement in the case of derivatives.
3. What are the factors have been driving the growth of financial derivatives?
4. Explain briefly the characteristics of derivatives.
5. What are the criteria for derivatives trading?
6. Explain step-by-step development of derivatives markets in India.
7. Explain the development and regulation of derivative markets in India
8. What are the objectives of regulatory controls of derivatives market?
9. Define hedging.
10. What do you mean by portfolio rebalancing?
11. Write a note on derivative products.
12. Explain the futures in India.
13. Write the myths and realities about the derivatives markets in India.

Answers: Self Assessment

1.	Derivatives	2.	Currency
3.	Hedging	4.	Avoid, accept
5.	Derivative market	6.	True
7.	False	8.	Hedgers
9.	Speculators	10.	Arbitrageurs
11.	False	12.	True
13.	False	14.	True
15.	True		

11.8 Further Readings

Books

Chitale, Rajendra P., 2003, Use of Derivatives by India's Institutional Investors: Issues and Impediments, in Susan Thomas (ed.), Derivatives Markets in India, Tata McGraw-Hill Publishing Company Limited, New Delhi, India.

Fitch Ratings, 2004, Fixed Income Derivatives – A Survey of the Indian Market,

Online links

www.fitchratings.com

husky1.stmarys.ca/~gye/derivativeshistory.pdf

www.financialpolicy.org/fpfspr8.pdf

www.yieldcurve.com/Mktresearch/.../Derivatives_Intro.pdf

Unit 12: Mutual Fund

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Objectives

After studying this unit, you will be able to:

- Explain the history of mutual funds industry in India
- Discuss the mutual funds – Organization
- Elaborate the investing in mutual funds, its advantages and demerits
- Discuss the Unit linked Insurance Plans (ULIPs)

Notes

Introduction

Various authors have defined a mutual fund in different ways. According to Pierce, James L, it is a non-depository or non-banking financial intermediary which acts as an "important vehicle for bringing wealth holders and deficit units together directly."

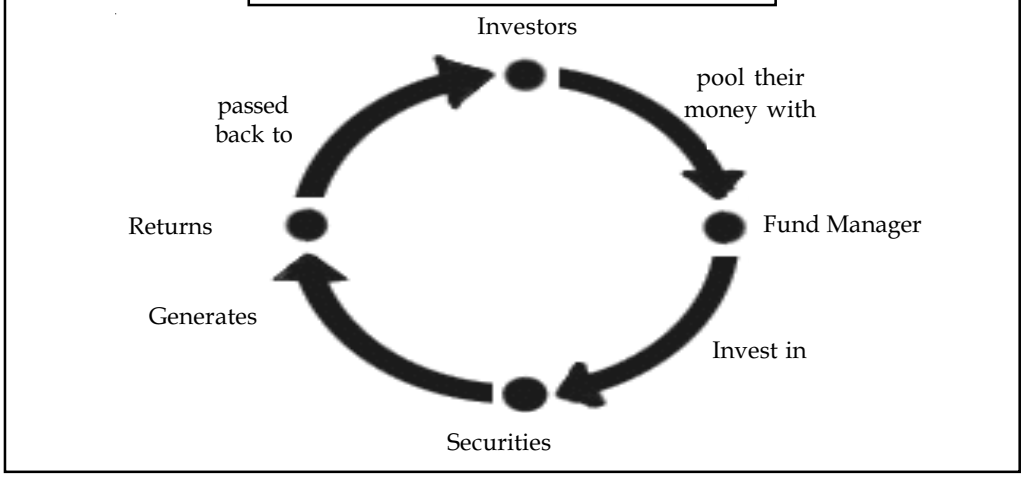
Weston, J. Fred and Brigham, Eugene F, in their book Essentials of Managerial Finance state that mutual funds are corporations that accept dollars from savers and then use these dollars to buy stock, long-term bonds, short-term debt instruments issued by business or government. These corporations pool funds and thus reduce risk by diversification.

A mutual fund is essentially a mechanism of pooling together the savings of a large number of small investors for collective investment, with an avowed objective of attractive yields and capital appreciation, holding the safety and liquidity as prime parameters.

According to the author:

A mutual fund is a trust that pools the savings of a number of investors who share a common financial goal. The money, thus, collected is then invested in capital market instruments such as shares, debentures and other securities. 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. Thus, a mutual fund is the most suitable investment for the common man as it offers an opportunity to invest in a diversified, professionally managed basket of securities at a relatively low cost. The flow chart below describes broadly the working of a mutual fund:

Figure 12.1: Mutual Fund Operation Flow Chart



12.1 History of Mutual Funds Industry in India

The origin of mutual fund industry in India is with the introduction of the concept of mutual funds by UTI in the year 1963. Though the growth was slow, but it accelerated from the year 1987 when non-UTI players entered the industry.

In the past decade, Indian mutual fund industry had seen a dramatic improvement, both quality-wise as well as quantity-wise. Before, the monopoly of the market had seen an ending phase, the Assets Under Management (AUM) was ₹ 67bn. The entry of the private sector entry to the fund family increased the AUM to ₹ 470 bn in March 1993 and till April 2004, it reached the height of 1,540 bn.

Notes

When we place the AUM of the Indian mutual funds industry under comparison, its total is less than the deposits of the State Bank of India alone. Mutual funds' AUM constitutes less than 11% of the total deposits held by the Indian banking industry.

The main reason for its poor growth is that the mutual fund industry is new in India. Large sections of Indian investors are yet to be familiarised with the concept. Hence, it is the prime responsibility of all mutual fund companies to market the product correctly ahead of selling.

The mutual fund industry can be broadly classified into four phases according to the development of the sector. Each phase is briefly described as under.

12.1.1 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 delinked from the RBI and the Industrial Development Bank of India (IDBI) took over the regulatory and administrative control in place of RBI. The first scheme launched by UTI was Unit Scheme 1964. At the end of 1988, UTI had ₹ 6,700 crore of assets under management.

12.1.2 Second Phase – 1987-1993 (Entry of Public Sector Funds)

Entry of non-UTI mutual funds: SBI Mutual Fund was the first followed by Canbank Mutual Fund (Dec 87), Punjab National Bank Mutual Fund (Aug 89), Indian Bank Mutual Fund (Nov 89), Bank of India (Jun 90), Bank of Baroda Mutual Fund (Oct 92), LIC in 1989 and GIC in 1990. The end of 1993 marked ₹ 47,004 as assets under management.

12.1.3 Third Phase – 1993-2003 (Entry of Private Sector Funds)

With the entry of private sector funds in 1993, a new era began in the Indian mutual fund industry, giving the Indian investors a wider choice of fund families. 1993 was also 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 (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 functions 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 has witnessed several mergers and acquisitions. As at the end of January 2003, there were 33 mutual funds with total assets of ₹ 1,21,805 crore. The Unit Trust of India with ₹ 44,541 crore of assets under management was way ahead of other mutual funds.

12.1.4 Fourth Phase – Since February 2003

This phase was a bitter experience for UTI. It was bifurcated into two separate entities. One is the Specified Undertaking of the Unit Trust of India with AUM of ₹ 29,835 crore (as on January 2003). The Specified Undertaking of Unit Trust of India, functioning under an administrator and under the rules framed by Government of India and does not come under the purview of the Mutual Fund Regulations.

Notes

The second is the UTI Mutual Fund Ltd., 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 ₹ 76,000 crore of AUM 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. As at the end of September 2004, there were 29 funds, which manage assets of ₹ 1,53,108 crore under 421 schemes.

Self Assessment

Fill in the blanks:

1. A mutual fund is a ..... that pools the savings of a number of investors who share a common financial goal.
2. A ..... is the most suitable investment for the common man as it offers an opportunity to invest in a diversified, professionally managed basket of securities at a relatively low cost.

Caselet

Mutual Fund Performance

As a professional investor, I've read quite a few annual reports. If you include quarterly reports, they number well over ten thousand. Early in my career this activity was limited to reports from companies, but now I research mutual funds of all types too. One section you see in every fund report is a discussion about past performance. While "past performance is no guarantee of future results" as the boilerplate legal language says, it can give you clues as to how a fund invests. Past performance should also raise certain questions in every portfolio manager's mind. Namely, why do we own (or want to own) this fund?

Reading through the report of one highly regarded real estate fund, I was struck by how the manager portrayed their performance. Because I do actually respect this shop and their process, we are going to leave the fund nameless. Let me present the performance data now, before discussion, so as not to taint your first opinion of it. I urge you to study the table and draw your own conclusion before continuing.

	1-Year	3-Year	5-Year	10-Year	Since Inception (13.5 Years)
Fund	16.9%	– 8.4%	1.5%	10.3%	11.5%
Benchmark	13.5%	– 5.0%	3.3%	11.3%	10.4%

Clearly, the fund has underperformed in the last year and in the 3-year period, which is not alarming in and of itself. But the fund has also underperformed in the 5 and 10-year periods as well. Ok, well what does management have to say about this? I quote:

"As indicated above, the Fund's long-term track record compares favourably" to the benchmark.

It does? All I see is that they had decent performance in the first 3.5 years of the fund's existence and they highlight the statistical fact that since inception the numbers are good. Not so good if you missed those years but held on for the last decade though. But perhaps there is more to the story?

Contd...

Notes

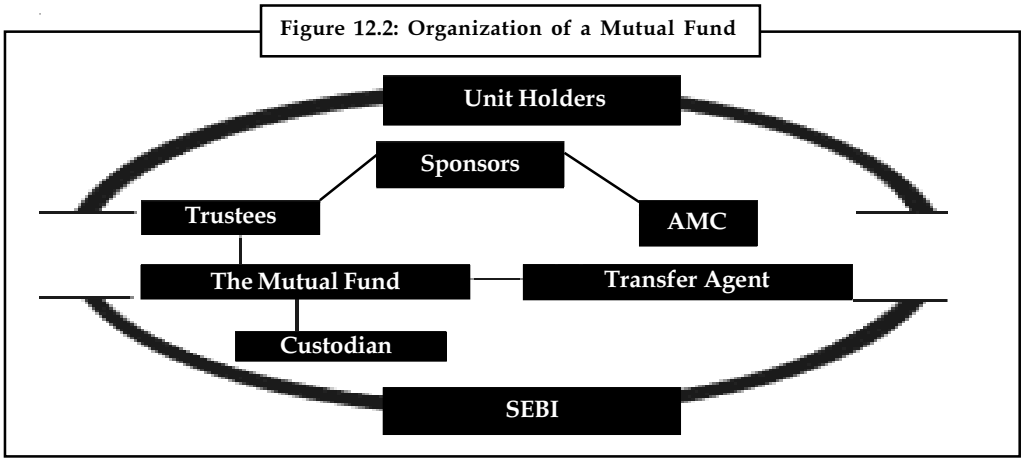
Indeed there is. Combing through annual performance data instead of rolling year periods, we find that this fund actually outperformed handily for the first 9 full years of its existence, beating the benchmark in 7 of those 9 years. In fact, they beat the benchmark in 8 of 12 or two-thirds of the full calendar years available, which is normally an impressive feat. The table, in this SEC required format, is highly misleading in terms of the accomplishments of this fund. Despite the good intentions of standardized performance reporting (which I still applaud), it certainly does not present an accurate picture in all cases. One lesson here is that investors who don't look deeper will often miss the larger picture.

Source: http://thelongrunblog.wordpress.com/2011/04/14/mutual-fund-perf/

12.2 Mutual Funds – Organization

There are many entities involved and the diagram below illustrates the organisational set up of a mutual fund:

Figure 12.2: Organization of a Mutual Fund



12.2.1 Organization of Mutual Funds

A mutual fund can be constituted either as a corporate entity or as a trust.

Did u know? In India, UTI was set up as a corporation under an Act of Parliament in 1964.

Indian banks when permitted to operate mutual funds were asked to create trusts to run these funds. The basic difference between a corporation and a trust is that in the case of the former, the liability is limited whereas in case of the latter, it is unlimited. Also, a corporation enjoys the status of separate legal entity that can act on its own behalf. A trust has to work on behalf of its trustees. Indian banks operating mutual funds had made a convincing plea before the government to allow their mutual funds to constitute them as 'Asset Management Companies.' The Department of Company Affairs, Ministry of Law, Justice and Company Affairs has issued guidelines in respect of registration of Asset Management Companies (AMCs), in consultation with Securities and Exchange Board of India, as follows:

1. ***Approval of AMC by SEBI:*** As per guidelines, AMC shall be authorized for business by SEBI on the basis of certain criteria and the Memorandum and Articles of Association of the AMC would have to be approved by SEBI. Accordingly, no company can register an AMC under the Companies Act 1956 without the Memorandum and Articles of Association being approved by SEBI.

Notes

2. ***Authorized capital of AMC:*** The primary objective of setting up of an AMC is to manage the assets of the mutual funds and other activities, which it can carry out, such as, financial services consultancy, which do not conflict with the fund management activity and are only secondary and incidental. That being so, it may not be practical to expect a company to be set up with a paid up capital of ₹5 crore to carry on only incidental activities, without any assurance of its receiving an approval from SEBI to act also as an Asset Management Company for a Mutual Fund. There should, therefore, not be any objection in registering an AMC if the authorized capital of such a company is approved by SEBI. Major players who help in running a mutual fund are as follows:

(a) *Registers and Transfer Agents:*

Their major responsibilities include:

(i) Receiving and processing the application form of a mutual fund

(ii) Issuing of unit/share certificates on behalf of mutual fund

(iii) Maintain detailed records of unit holders transactions

(iv) Purchasing, selling, transferring and redeeming the Unit/Share Certificates

(v) Issuing of income/dividend warrants, broker cheques etc.

(vi) Creating security interest on units/certificates for allowing loans against them

(b) *Advertiser*

Major responsibilities of an advertiser include:

(i) Helping mutual funds organizers to prepare a media plan for marketing the fund.

(ii) Issuing/buying the space in newspapers and other electronic media for advertising the various features of a fund.

(iii) Arranging or hoardings at public places.

(c) *Advisor/manager:*

It is generally a corporate entity that does the following jobs:

(i) Professional advice on the fund's investments,

(ii) Advice on asset management services.

(d) *Trustees:*

Trustees provide the overall management services and charge management fee.

(e) *Custodian:*

A custodian is again a corporate body that carries out the following functions:

(i) Holds securities

(ii) Receives and delivers securities

(iii) Collects income/interest/dividends on the securities

(iv) Holds and processes cash

Besides the above, other players are as under:

(i) Fund Administrator;

(ii) Fund Accounting Services;

Notes

(iii) Legal Advisors;

(iv) Fund Officers;

(v) Underwriters/Distributors;

(vi) Legal Advisors.

All the above agencies play a major role in any mutual fund organized in the US and other European countries, as they are separate agencies/corporations independent of the mutual fund. However, in India so far, mutual funds have taken the services of the following outside agencies:

(i) Registrars and Transfer Agents

(ii) Advertisers

(iii) Legal Advisors

(iv) Custodians

Self Assessment

State whether the following statements are true or false:

3. A mutual fund can be constituted either as a corporate entity or as a trust.
4. The basic difference between a corporation and a trust is that in the case of the former, the liability is unlimited whereas in case of the latter, it is limited.

12.2.2 Advantages of Investing in Mutual Funds

By investing in various mutual funds schemes, small investors or middle-income investors seek the following advantages compared to other types of investments:

1. Investment variety and spread in different industries.
2. Capital appreciation without having to watch the upward or downward performance curves of different scrips.
3. No impulsive decision-making regarding purchase or sale of share/securities, since the funds are managed by expert, professional fund managers who have access to the latest detailed information regarding the stock market and individual scrips.
4. Liquidity through buyback arrangements of the mutual fund or listing on some stock exchanges after a certain lock-in period.
5. Even the smallest dividend or capital gain gets reinvested, thus enhancing the effective return.
6. Freedom from paperwork
7. Tax benefits on invested amounts/returns or dividends/capital gains

Apart from the above, other advantages of mutual funds are:

The advantages of investing in mutual funds are:

- ***Diversification:*** The best mutual funds design their portfolios so individual investments will react differently to the same economic conditions. For example, economic conditions like a rise in interest rates may cause certain securities in a diversified portfolio to decrease in value. Other securities in the portfolio will respond to the same economic conditions by

Notes

increasing in value. When a portfolio is balanced in this way, the value of the overall portfolio should gradually increase over time, even if some securities lose value.

- ***Professional Management:*** Most mutual funds pay top-flight professionals to manage their investments. These managers decide what securities the fund will buy and sell.
- ***Regulatory oversight:*** Mutual funds are subject to many government regulations that protect investors from fraud.
- ***Liquidity:*** It's easy to get your money out of a mutual fund. Write a cheque, make a call, and you've got the cash.
- ***Convenience:*** You can usually buy mutual fund shares by mail, phone, or over the Internet.
- ***Low cost:*** Mutual fund expenses are often no more than 1.5% of your investment. Expenses for index funds 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.
- Transparency
- Flexibility
- Choice of schemes
- Tax benefits
- Well regulated

12.2.3 Drawbacks of Mutual Funds

Mutual funds have their drawbacks and may not be for everyone:

- ***No guarantees:*** No investment is risk-free. If the entire stock market declines in value, the value of mutual fund shares will go down as well, no matter how balanced the portfolio. Investors encounter fewer risks when they invest in mutual funds than when they buy and sell stocks on their own. However, anyone who invests through a mutual fund runs the risk of losing money.
- ***Fees and commissions:*** All funds charge administrative fees to cover their day-to-day expenses. Some funds also charge sales commissions or 'loads' to compensate brokers, financial consultants, or financial planners. Even if you don't use a broker or other financial adviser, you will pay a sales commission if you buy shares in a Load Fund.
- ***Taxes:*** During a typical year, most actively managed mutual funds sell anywhere from 20 to 70% of the securities in their portfolios. If your fund makes a profit on its sales, you will pay taxes on the income you receive, even if you reinvest the money you made.
- ***Management risk:*** When you invest in a mutual fund, you depend on the fund's manager to make the right decisions regarding the fund's portfolio. If the manager does not perform as well as you had hoped, you might not make as much money on your investment as you expected. Of course, if you invest in index funds, you forego management risk, because these funds do not employ managers.

Self Assessment

Fill in the blanks:

5. Economic conditions like a rise in interest rates may cause certain securities in a diversified portfolio to ..... in value.
6. ..... investment is risk-free.

Notes

12.3 Types of Mutual Fund Schemes

A wide variety of mutual fund schemes exists to cater to the needs such as financial position, risk tolerance and return expectations etc. The following points below gives an overview into the existing types of schemes in the industry.

- ***By Structure***
  - Open-ended schemes
  - Close-ended schemes
  - Interval schemes
- ***By Investment Objective***
  - Growth schemes
  - Income schemes
  - Balanced schemes
  - Money market schemes
- ***Other Schemes***
  - Tax saving schemes
  - Special schemes
  - Index schemes
- ***Sector-specific schemes***

12.3.1 Grouping of Mutual Funds

Mutual Funds are grouped as under:

Open-ended Funds

In open-ended funds, there is no limit to the size of the funds. Investors can invest as and when they like. The purchase price is determined on the basis of Net Asset Value (NAV).

Did u know? NAV is the market value of the fund's assets divided by the number of outstanding shares/units of the fund.

Close-ended Funds

These funds are fixed in size as regards the corpus of the fund and the number of shares. In close-ended funds, no fresh units are created after the original offer of the scheme expires. The shares/units of these funds are not redeemable at their NAV during their life as are in the case of open-ended funds. The shares of such funds are traded in the secondary market on stock exchanges at market prices that may be above or below their NAV.

Income-oriented Funds

These funds offer a return much higher than the bank deposits but with less capital appreciation. The emphasis being on regular returns, the pattern of investments in general is oriented towards fixed income-yielding securities like non-convertible debentures of consistently good dividend paying companies, etc.

Notes

Growth-oriented Funds

These funds do not offer fixed regular returns but provide substantial capital appreciation in the long run. The pattern of investment in general is oriented towards shares of high growth companies.

Balanced Funds or Income and Growth-oriented Funds

These offer a blend of immediate average returns and reasonable capital appreciation in the long run. The investment portfolio of these kinds of funds is evenly distributed among fixed income bearing corporate securities and common stock with growth potential.

Area Funds

These are funds that are raised in other countries for providing access to foreign investors. The India Growth Fund and the India Fund raised in the US and the UK respectively are examples of area funds.

Specialised Funds or Industry Funds

These funds are invested in a particular industry like cement, steel, jute, power or textile, etc. These funds carry high risks with them as the entire fund is exposed to a particular industry. Money market funds are another kind of specialized funds.

Tax Relief Funds

These funds are raised for providing tax relief to those investors whose income comes under taxable limits. Equity Linked Savings Scheme, under Section 80 CCB of the Income Tax Act, 1961, floated by SBI Mutual Fund, PNB Mutual Fund, LIC Mutual Fund and Canbank Mutual Fund in the month of February 1991 is such kinds of funds. These funds provide direct deductions from taxable income up to a certain limit (₹ 10,000 under Sec. 80 CCB of the Income Tax Act)

Caution Specialised Funds invest in money market instruments only.

Self Assessment

State whether the following statements are true or false:

7. A wide variety of mutual fund schemes exists to cater to the needs such as financial position, risk tolerance and return expectations etc.
8. In open-ended funds, there is no limit to the size of the funds.

12.4 Mutual Fund Companies in India

The era between 1963 and 1987 marked the existence of only one mutual fund company in India with ₹ 67bn assets under management (AUM), by the end of its monopoly era, the Unit Trust of India (UTI). By the end of the 80s, a few other mutual fund companies in India took their position in mutual fund market.

Notes The concept of mutual funds in India dates back to the year 1963.

The new mutual fund companies to enter the Indian market were SBI Mutual Fund, Canbank Mutual Fund, Punjab National Bank Mutual Fund, Indian Bank Mutual Fund, Bank of India Mutual Fund.

Notes

The succeeding decade saw a new horizon in the Indian mutual fund industry. By the end of 1993, the total AUM of the industry was ₹ 470.04 bn. The private sector funds began penetrating the fund families. In the same year, the first mutual fund regulations came into existence with re-registering all mutual funds except UTI. The regulations were further given a revised shape in 1996.

Kothari Pioneer was the first private sector mutual fund company in India, which has now merged with Franklin Templeton. Just after ten years since the penetration of private sector players began, their total assets rose up to ₹ 1218.05 bn. Today there are 33 mutual fund companies in India.

12.4.1 Types of Mutual Fund Schemes in India

Depending on their objectives, pattern of investment and returns etc., mutual fund schemes in India can be classified into five broad categories:

1. Growth Funds
2. Income Funds
3. Growth and Income Funds
4. Tax Planning Schemes
5. Other Schemes

Let us take a quick view of the important features of these schemes as follows:

Growth Funds

(i) ***Objective:*** Generating substantial capital appreciation.

(ii) ***Investment Pattern:*** Nearly all in equity shares.

(iii) ***Duration:*** Seven years

(iv) ***Investment Risk:*** High risk in reinvestment schemes or normal risks of equity investment for periodic capital gains schemes.

(v) ***Returns:*** No assured return but high returns are expected.

(vi) ***Liquidity:*** No repurchase facility except at the end of the scheme.

(vii) Listing on stock exchanges after certain lock in period from the date of allotment.

(viii) Transfer of units is allowed.

(ix) ***Target Investors:*** Individuals in higher tax brackets interested in getting higher gains to beat taxation.

Some examples of Growth Schemes

	Scheme	Issued by
(a)	Master Share, Master Share Plus, Master Gain, UGS-200	Unit Trust of India
(b)	Magnum Express, Magnum Multiplier	SBI Mutual Fund
(c)	Canshare, Canstar Cap, Cangrowth, Canbonus	Canbank Mutual Fund
(d)	Ind Ratna, Ind Sagar, Ind Moti	Indbank Mutual Fund

Notes

Main Advantages

(a) Generally high returns due to capital gains

(b) Easy liquidity due listing on stock exchanges and transferability as also bank loan facility

(c) Tax exemptions on income as also long-term capital gains

Disadvantages

(a) High risk

(b) No assured returns

Income Funds

(i) ***Objective:*** Assured minimum income and safety of capital

(ii) ***Duration:*** 5-7 years

(iii) ***Investment Pattern:*** Bulk (75-80%) of funds invested in fixed income securities like government bonds, company debentures, etc. and rest in equity shares,

(iv) ***Investment Risk:*** Absolute safety,

(v) ***Return:*** 14.75% p.a. upwards-payable monthly or quarterly plus mid scheme bonus and end of the scheme appreciation (minimum 2%).

(vi) ***Liquidity:*** No listing on stock exchanges and units are not transferable. Repurchase facility after initial lock-in period of three years.

Main Advantages

(a) Safety of investment and assured minimum income.

(b) Reasonable liquidity due to availability of bank loan facility

(c) Income/dividend eligible for exemption up to ` 10,000 under Section 80L of Income Tax Act.

Disadvantage

Extraordinary gains not possible.

Some examples of income funds:

	Scheme	Issued by
(a)	Units Scheme of 1964, Growing Income Unit Scheme of 1987	Unit Trust of India
(b)	Magnum Monthly Income Schemes	SBI Mutual Fund
(c)	Rising Monthly Income Scheme	BOI Mutual Fund
(d)	Swarna Pushpa	Indbank Mutual Fund
(e)	GIC Safe-1991, GIC-Rise-1991, Big Value	GIC Mutual Fund
(f)	PNBRIPS	PNB Mutual Fund

Growth and Income Funds

These are 'No Guaranteed Return' schemes of either all enquiry fund type or balanced fund type.

All Equity Fund Schemes

(i) Objective: High income combined with growth.

Notes

(ii) Duration: 7 years

(iii) Investment Pattern: Almost all in equity shares

(iv) Investment Risk: Risky investment Capital, value can go up or down.

(v) Returns: No assured return. Annual distribution of minimum 80% of the Trust's net income from dividends, interest, etc. Good capital appreciation expected at the end of the scheme.

(vi) Liquidity: No repurchase facility except at the end of the scheme.

Listing on stock exchanges

Transfer of Units allowed

Bank loan up to 75% of the face value of units allowed

Main Advantages

(a) Good annual returns (though not assured) with good capital appreciation at the end of the scheme

(b) Tax saving on capital gains

Some examples of all equity funds:

Scheme		Issued by
(i)	Canstock, Can double	Canbank Mutual Fund
(ii)	PNB Premium Plus- 91	PNB Mutual Fund

Balanced Funds

1. Objective**:** Income and growth with reasonable safety.
2. Duration: seven years.
3. Investment Pattern: About 50% in equity and the rest in debentures etc.
4. Returns: No assured return, but steady income due to annual distribution of minimum of 80% of the Trust's income by way of dividends, interest etc.

   Reasonably high capital appreciation also expected.
5. Liquidity: Repurchase facility after initial lock-in period of three years.

   No listing on stock exchanges.

   Transfer of units permitted.

   Units can be pledged to banks for loans.

Main Advantages

(a) Reasonable return with possibility of reasonable capital appreciation

(b) Tax exemptions on income as well as capital gains

Some examples of balanced funds:

Scheme	Issued by
MRIS' 87,89,90	SBI Mutual Fund
Cancigo, Cangi	Canbank Mutual Fund

Notes

Tax Planning Schemes

The investments made under these schemes are deductible from the taxable income up to certain limits, thus providing substantial tax relief to the investors.

Examples of tax planning schemes*:*

(a) MTSS' 89, 90, 91 and Magnum GIFTS of Mutual Fund

(b) Can 80CC and Canstar 80L of Canbank Mutual Fund

(c) Ind 88A of Indbank Mutual Fund

(Here tax rebate is available on investments as in the case of investments in LIC, Provident Fund, NSC, etc)

(d) Equity Linked Savings Schemes (ELSS)

Scheme	Issued by
MELS-91	SBI Mutual Fund
Can Pep-91, 92	Canbank Mutual Fund
Ind Shelter	Indbank Mutual Fund
MEP-91,92	Unit Trust of India
BOINAANZA 80 CCB	BOI Mutual Fund
PNB ELSS	PNB Mutual Fund

ELSSs are 10-year schemes and the withdrawals (by purchase) are permitted after an initial lock-in period of three years but the entire withdrawn amount again becomes taxable. As such, these are only tax deferent schemes.

Main advantages

(i) Substantial tax saving/deferment

(ii) Possibility of reasonable capital gains

Main disadvantages

(i) No liquidity during lock in period

(ii) Withdrawn amounts are again taxable

(iii) Units are not transferable

Other Schemes

These include schemes of 10-15 years duration, which offer multiple benefits. For example:

	Scheme	Benefits
(a)	Unit Linked Insurance Plan of UTI	i. Contribution eligible for tax deduction under Sec 88A of IT Act providing tax rebate of 20% of Contribution ii. Insurance cover up to target amount iii. Reasonable income by way of dividend iv. Liquidity: withdrawal from the scheme any time on a Month's notice permitted v. Safety of capital

Contd...

Notes

(b)	Dhanaraksha, Dhansahyog, Dhanavriddhi Schemes of LIC Mutual Fund	These offer some or all of the following benefits: i. Life Insurance cover ii. Accident Insurance cover iii. Reinvestment of annual dividends or reasonable dividend iv. Safety of capital v. Reasonable capital appreciation vi. Liquidity: repurchase facility after initial lock-in period of three years vii. Units are not transferable, but bank loan facility is available viii. Tax exemption on dividends under Section 80L and tax benefits under long-term capital gains are available

Other Categories

Sector Specific Schemes: These are the funds/schemes that invest in the securities of only those sectors or industries as specified in the offer documents e.g. pharmaceuticals, software, fast moving consumer goods (FMCG), petroleum stocks, etc.

Tax Saving Schemes: These schemes offer tax rebates to the investors under specific provisions of the Income-tax Act, 1961 as the government offers tax incentives for investment in specified avenues e.g. Equity Linked Savings Schemes (ELSS).

Off-shore Funds: These funds will have non-residential investors and are regulated by the provision of the foreign countries where these are registered. Further, these funds are governed by the rules and procedures laid down for the purpose of approving and monitoring their performance by the Department of Economic Affairs, Ministry of Finance and the directions of RBI.

Asset Management Mutual Funds: These are also called Asset Management Companies (AMCs). These have special characteristics of dealing with assets other than securities. These funds can acquire various assets and give them on lease basis to needy lessees.

Self Assessment

Fill in the blanks:

9. The concept of mutual funds in India dates back to the year .....

10. ..... are also called asset management companies (AMCs).

12.5 Net Asset Value

NAV is calculated as follows:

NAV =

$$\frac{\text{Fair market value of Scheme's Investments + Receivables + Accrued income + Other assets} - \text{Accrued expenses} - \text{Payables} - \text{Other liabilities}}{\text{Number of units outstanding}}$$

Notes

Entry Load and Exit Load

A Load Fund is one that charges a percentage of NAV for entry or exit. That is, each time one buys or sells units in the fund, a charge will be payable. This charge is used by the mutual fund for marketing and distribution expenses.

Calculation of Front-end Load of Entry Load

$$\text{Public Offer Price} = \frac{\text{Net Asset Value}}{1 - \text{Front-end Load}}$$

Calculation of Back-end Load or Exit Load

$$\text{Redemption Price} = \frac{\text{Net Asset Value}}{1 - \text{Back-end Load}}$$

Return on Investment

The investor who invests in mutual fund units can receive returns in the following two ways:

Capital Appreciation - Profit earned on sale of units at a higher NAV than the original cost.

Income Distribution (dividend) - When a fund makes a profit on its investment, this profit will be given to investor as a dividend which can be re-invested in the fund or retain it in the form of cash.

Return on Mutual FundReturn on Mutual Fund

$$r = \frac{(NAV_t - NAV_{t-1}) + 1_t + G_t}{NAV_{t-1}}$$

Where r = Return on mutual fund

NAV_t = Net asset value at the time period 't'

NAV_{t-1} = Net asset value at time period "t–1"

I_t = Income at time period 't'

G_t = Capital gain distribution at time period 't'

Required Return on Mutual Fund Investment (as a percentage)

$$R_2 = \left[\frac{1}{1 - \text{Initial expenss}(\%)} \times R_1\right] + \text{Rcurring expenses}(\%)$$

Where, R_1 = Personal Return of investor

R_2 = Mutual Fund earnings

Effective Yield on Mutual Fund Investment

$$= \frac{\text{Dividend + Capital Appreciation}}{\text{Initival Investment}} \times \frac{365}{\text{No. of days}} \times 100$$

Illustration: A mutual fund that had a net asset value of ₹ 10 at the beginning of month 1 made income and capital gain distribution of ₹ 0.05 and ₹ 0.04 per share respectively during the month, and then ended the month with a net asset value of ₹ 10.03. Calculate monthly return.

Notes

Solution:

Monthly Return on the Mutual Fund

$$r = \frac{(NAV_t - NAV_{t-1}) + 1_t + G_t}{NAV_{t-1}}$$

Where r = Return on mutual fund

NAV_t = Net asset value at the time period 't' i.e. ₹10.03

NAV_{t-1} = Net asset value at time period "t – 1" i.e. ₹10.00

I_t = Income at time period 't' i.e. ₹ 0.05

G_t = Capital gain distribution at time period 't' i.e. ₹ 0.04

By substituting, we get,

$$r = \frac{(₹\ 10.03 - ₹\ 10.00) + ₹\ 0.05 + ₹\ 0.04}{₹\ 10.00} = 0.012$$

= 1.20% p.m. or 14.4% p.a.

Self Assessment

Fill in the blanks:

11. A load fund is one that charges a percentage of ..... for entry or exit.
12. Each time one buys or sells units in the fund, a ..... will be payable.

12.6 Creation of a Portfolio

The portfolio of a mutual fund depends on the objectives of each scheme/fund floated by mutual fund. For example, the objective of an income-oriented scheme is to provide regular monthly income to its shareholders. The portfolio of such a fund should consist of fixed income-bearing securities, so that the fund can achieve its objective. The Indian experience reveals that the portfolio of such a fund consists of mainly the following securities:

- Non-convertible Debentures (NCD's) - 75 to 90%
- Call Money -10 to 25%

A portfolio of income-cum-growth oriented fund consists of mainly NCDs up to 70% of the portfolio, approximately 25% of equities and 5% of money market instruments. On the other hand, a pure growth of equity fund creates a portfolio of share/stock of growth or blue-chip companies.

The fund manager of a mutual fund is the person responsible for buying these securities in such a way that the fund is able to achieve its objectives. A fund manager tries to create a well-diversified portfolio of securities so that unsystematic risk is reduced significantly and returns expected on individual securities and on portfolio is directly related to 'market risk' or systematic risk. A fund manager has the following investment options in terms of buying securities from the Indian market:

Notes

Table 12.1

Securities	Returns
1. Call Money	Average returns 15%
2. Bills	13 to 14%
3. Treasury Bills	10%
4. Govt. Bonds	11.5%
5. Public Sector Bonds	13%
6. Company Debentures	15% to 16.5% (yield to maturity)
7. Dividend/Return on equity shares	2-3%
8. Capital Gains	Uncertain

The expected returns from a mutual fund are higher than what is provided by bills, treasury bills, government or PS bonds. Hence mutual funds concentrate on NCDs, equities and to some extent, call money, which provide good returns along with liquidity. While buying these securities, the fund manager takes into consideration the following norms for each kind of security.

Non-convertible Debentures

1. ***Asset Cover or Security Cover:*** A company must maintain a minimum asset cover. This cover is calculated on the basis of secured borrowings and debentures charged to fixed assets, whereby fixed assets should be in general more than one time of the total such existing borrowings and debentures secured by equitable mortgage on fixed assets. The movable fixed assets are generally excluded from the calculations.
2. ***Interest Cover:*** PBIDT (profit before interest, depreciation and taxes) should be around two times the existing interest liability plus the interest liability on the proposed debentures so as to protect the payment of interest on the debentures. This cover is to be calculated on the basis of the average of the preceding three years profit figures.
3. Company must have paid dividend for the last three or minimum two preceding years.
4. Net worth of the company should be around ₹1 crore.

Small variations in the above norms are accepted provided the company is otherwise very sound and the rate of return is higher than normal.

12.6.1 Portfolio Revision

There are two broad aspects of portfolio management, namely, effective investment planning and constant review and revision of investment.

Constant review and revision of investment requires:

1. Continuous monitoring of the quality management of the companies in which investment has already been made.
2. Continuous financial analysis and trend analysis of the companies' balance sheets/profit and loss account to choose sound companies and off-load investment made in companies where the performance is slackening.
3. Continuous analysis of the securities market trends.

Notes

Systems and Controls

For managing a portfolio, it is not only the creation, re-creating and regrouping of various securities that are important for achieving the desired rate of return, but various kinds of systems and controls too are needed. A mutual fund generally provides the desired controls through its accounting and custodian system. We shall discuss each of them and how these help to manage a portfolio.

Accounting System

An accounting system must clearly disclose:

1. The policy in respect of recognition of revenue and income from investment.
2. The policies relating to valuation of investments.
3. The aggregate carrying value and market value of non-performing assets under each type of investment.
4. Provision to be made for depreciation/loss in the value of non-performing investments.
5. Per unit Net Asset Value (NAV) at various intervals and at the end of the accounting year.

All the above accounting policies, if pursued consistently, help to maintain a clear picture about all investments in a portfolio and thus provide the true picture of the portfolio.

Self Assessment

Fill in the blanks:

13. The ..... of a mutual fund depends on the objectives of each scheme/ fund floated by mutual fund.
14. The portfolio of a fund should consist of fixed ..... securities, so that the fund can achieve its objective.

12.7 Unit Linked Insurance Plans (ULIPs)

ULIPs are a category of goal-based financial solutions that combine the safety of insurance protection with wealth creation opportunities. In ULIPs, a part of the investment goes towards providing you life cover. The residual portion is invested in a fund which in turn invests in stocks or bonds. The value of investments alters with the performance of the underlying fund opted by you.

Simply put, ULIPs are structured such that the protection element and the savings element can be distinguished and hence managed according to your specific needs, offering unprecedented flexibility and transparency.

12.7.1 Working of ULIPs

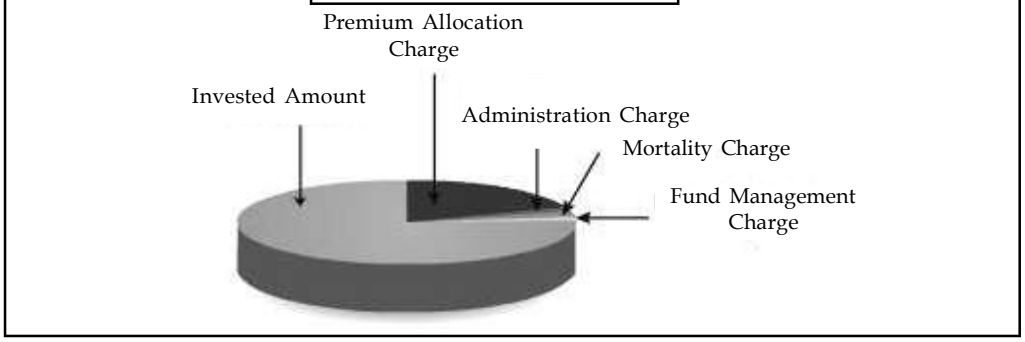
It is critical that you understand how your money gets invested once you purchase ULIP.

Once you decide the amount of premium to be paid and the amount of life cover you want, the insurer deducts some portion of the premium upfront. This portion is known as the Premium Allocation charge and this varies from product to product. The rest of the premium is invested in the fund or mixture of funds chosen by you. Mortality charges and administration charges are thereafter deducted on a periodic (mostly monthly) basis whereas the fund management charges are deducted on a daily basis.

Notes

Since the fund of your choice has an underlying investment – either in equity or debt or a combination of the two – your fund value will reflect the performance of the underlying asset classes. At the time of maturity of your plan, you are entitled to receive the fund value as at the time of maturity. The pie-chart below illustrates the split of your ULIP premium in a graphical format.

Figure 12.3: Premium Break Up



In addition to the investment fund ULIPs give you the benefit of insurance cover as well. The mortality charge mentioned above goes towards provision of this cover.

Over a period of time, the component of charges as a percentage of the premium paid tends to decrease. Which is why, you should continue paying your premiums regularly. That is the best way of making your ULIP deliver on its dual benefit of protection and wealth creation.

ULIPs are the most talked about investment option today! In fact, they have contributed over 50% of new business for companies like Birla Sun Life and ICICI Prudential. Are you looking for safe investment options in India? Are ULIPs better than Mutual Funds? Are your returns sustainable with ULIPs? Will your ULIP investment work only if you plan to stay invested for a long term? Read on and find out.

Limited amount of money available to invest, need insurance and also want to invest in a mutual fund or similar investment? ULIPs could be the ideal option for you. Unit Linked Insurance Plan (ULIP) is an insurance policy where funds are invested in the capital market. You are sure to find insurance companies vying for your attention with ULIPs in new and attractive packages. ULIPs come with both insurance and investment components. If you're open to high risk investment options, you can shun the traditional endowment plans for ULIPs which invest the entire principal sum in equities.

The response to ULIPs has been impressive ever since its launch and it has brought good returns for many investors. If you choose ULIPs you enjoy tax benefits under Sec 80C. You can also switch between equity funds and debt funds or vice versa without fearing any entry or exit charges as in the case of Mutual Funds. However your investment in ULIP's will work only if you stay invested on a long term (more than 10 years).

Have you decided to invest in ULIPs? Here's a three-step plan to find the right ULIP for you.

12.7.2 Understand ULIPs

Gather as much information as possible on ULIPs that you are considering investing in, understand how they work and seek advice from financial experts on potential best and worst case returns if the need be so you don't encounter nasty surprises later.

Notes

12.7.3 Consider Your Needs and Risk Profile while Choosing ULIPs

In a volatile market situation, you can invest in ULIPs by way of Systematic Investment Plan (SIP) and turn the volatility of the market into an advantage for you. Keep your long term financial goals in mind while choosing a ULIP portfolio so you aren't affected by short term swings in the market. If you are a low risk profile investor, then pick debt heavy ULIPs. If you're younger or have a higher risk profile, then get into an Equity version.

12.7.4 Compare and Choose ULIPs

While choosing ULIPs you must find out how debt, equity and balanced schemes are performing. What are the expenses you will incur with the choice of ULIPs? How many times can you change the asset allocation of your ULIP account? Does your ULIP offer you a minimum guarantee? Find answers to these questions before you choose a ULIP.

Task Research on new schemes of ULIPs in India.

Self Assessment

State whether the following statements are true or false:

15. ULIPs are a category of goal-based financial solutions that combine the safety of insurance protection with wealth creation opportunities.
16. While choosing ULIPs you must find out how debt, equity and balanced schemes are performing.

Case Study

John Hancock Mutual Funds Financial Information Portal

John Hancock Mutual Funds (JH Funds), a subsidiary of Manulife, manages more than $50 billion in variety of open- and closed-end mutual funds and various other investment instruments. In 2004, Manulife acquired John Hancock, and, during its analysis of the various acquired business units, decided that it wanted to elevate JH Funds, then ranked in the high teens among U.S. mutual fund providers in terms of assets under management, to a top-ten provider. Seizing leadership in the online marketing of mutual funds was a prominent part of its plan.

JH Funds had been an early pioneer in online mutual fund marketing, going live with jhfunds.com in 1999. That website ran on ATG Dynamo, using an Oracle database and Interwoven Teamsite as a content management system. Dynamo had mostly failed to gain acceptance as a web development platform, and the site's look and feel were showing their age.

Requirements

JH Funds decided to undertake a complete rewrite of the site, with the following goals:

- Simpler, more intuitive site navigation

Contd...

Notes

- A new, fresher look and feel
- A full-site search function
- Cleaner integrations with third-party content
- Migration to a Manulife-standard web platform
- Improved content management to give business users more control and allow for more up-to-date content

Most importantly, the new site had to be up and running within 8 months, by June of the following year, so that it could help JH Funds' sales staff achieve their goals for that fiscal year. Quality could not be compromised, but cost was flexible.

Nevo's Solution

JH Funds had already selected a design agency for the project, Toronto-basedTeehan+Lax (T+L). Nevo immediately set about working with its staff and with JH Funds marketing to conduct full requirements gathering, teasing out the details that T+L's designs necessarily glossed over. In parallel, Nevo began building an implementation team and performing design work, selecting technology platforms, laying out core components like site authentication, and refining the content management system integration strategy.

Based on its experience with ASP.NET 2.0's beta version, Nevo recommended using the newly-released development platform, while it suggested moving to SQL Server 2000, as SQL Server 2005, while in full release, was not yet a Manulife standard. While JH Funds was hesitant to continue using Teamsite as a CMS, together with Nevo it decided to hold that component constant amid all the other change.

Nevo's site component strategy was to use standard ASP.NET components wherever possible, digging deep into the code to provide customization hooks where necessary. Site authentication was a particularly thorny issue, as JH Funds wanted to unify authentication and site navigation across three logical sites, one each for the public, JH Funds partners, and JH Funds staff.

The original jhfunds.com stored many of its pages wholesale in a content management system, depending on content authors to format it properly. The new system wherever possible stored snippets of text in a database and formatted the text in code, removing formatting responsibility from business users that lacked web page authoring expertise.

With an fairly open budget and a tight time constraint, Nevo avoided the common consulting pitfall of overstaffing. Nevo staffed a team of 1 lead, 2 senior developers, and 2 junior developers, depending on JH Funds staff for database design and testing. We believed that this staffing level was optimal, even ignoring cost; the coordination overhead of additional developer would have actually slowed the work. To meet JH Funds' tight time constraints, Nevo recommended and won approval for deferring some pieces of functionality to a second phase, including the integration of a site search engine.

Results

The redesigned site went live on schedule in June with the deferred functionality following just a few months later, in October. T+L's clean designs impressed everyone involved in the project, and, with Nevo's concerted effort to produce a site faithful to their vision, jhfunds.com went on to win numerous awards, including an Outstanding Website award from the Web Marketing Association and 5 different "best" awards from the Mutual Fund Education Alliance. Nevo's content management vision, while far less publicly visible,

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was equally successful: within a few months of the initial launch, over 30 members of the JH Funds marketing and product management organizations were creating and editing site content.

Question

What are the goals of JH Funds?

Source: http://www.nevo.com/our-knowledge/casestudies/JHFundsPopup.asp?ID=1

12.8 Summary

- A mutual fund is a trust that pools the savings of a number of investors who share a common financial goal. The money, thus, collected is then invested in capital market instruments such as shares, debentures and other securities.
- 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.
- Thus, a mutual fund is the most suitable investment for the common man as it offers an opportunity to invest in a diversified, professionally managed basket of securities at a relatively low cost.
- Mutual funds have proved to be an attractive investment for many investors, the world over, since they provide them a mixture of liquidity, return and safety in accordance with their performance.
- Further, the investor obtains these benefits without having to directly a diversified portfolio, which is handled by specialists.
- The interests of various investors are generally protected through mutual funds. As individual investors, they may not hold much clout in companies whose shares they hold, but by being part of institutional investors like mutual funds, their bargaining power is enhanced.
- The portfolio of a mutual fund depends on the objectives of each scheme/fund floated by mutual fund. For example, the objective of an income-oriented scheme is to provide regular monthly income to its shareholders.
- The portfolio of such a fund should consist of fixed income bearing securities so that the fund can achieve its objective.

12.9 Keywords

Close-ended Funds: These funds are fixed in size as regards the corpus of the fund and the number of shares.

Growth-oriented Funds: These funds do not offer fixed regular returns but provide substantial capital appreciation in the long run. The pattern of investment in general is oriented towards shares of high growth companies.

Income-oriented Funds: These funds offer a return much higher than the bank deposits but with less capital appreciation.

NAV: NAV is the market value of the fund's assets divided by the number of outstanding shares/units of the fund.

Notes

Open-ended Funds: In open-ended funds, there is no limit to the size of the funds. Investors can invest as and when they like. The purchase price is determined on the basis of Net Asset Value (NAV).

Specialised Funds or Industry Funds: These funds are invested in a particular industry like cement, steel, jute, power or textile, etc.

Tax Relief Funds: These funds are raised for providing tax relief to those investors whose income comes under taxable limits.

ULIPs: ULIPs are a category of goal-based financial solutions that combine the safety of insurance protection with wealth creation opportunities.

12.10 Review Questions

1. Write brief note on the concept of mutual funds.
2. Explain the mutual fund operation flow chart.
3. Write a note on the history of mutual funds industry in India.
4. Explain the organizational functions of mutual funds.
5. What are the advantages of investing in mutual funds?
6. Are there any drawbacks of mutual funds in India? If yes, what are the drawbacks? What are the means to overcome these drawbacks?
7. What are the different types of mutual funds schemes? Explain them one by one, with examples.
8. Write a short note on:
   (a) Open-ended schemes
   (b) Close-ended schemes
   (c) Interval schemes
9. Explain with examples mutual fund schemes based on investment objectives:
   (a) Growth schemes
   (b) Income schemes
   (c) Balanced schemes
   (d) Money market schemes
10. Write notes on tax saving schemes, special schemes, index schemes and sector-specific schemes.
11. What do you mean by creation of a portfolio?
12. Explain portfolio revision.

Answers: Self Assessment

1.	Trust	2.	mutual fund
3.	True	4.	False
5.	Decrease	6.	No

Notes

7.	True	8.	True
9.	1963.	10.	Asset management mutual funds
11.	NAV	12.	Charge
13.	Portfolio	14.	Income-bearing
15.	True	16.	True

12.11 Further Readings

Books

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Unit 13: Commodity Market

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Objectives

After studying this unit, you will be able to:

- Explain the concept of Indian connection of commodities market
- Discuss the commodity and currency derivatives
- Elaborate the legal framework
- Discuss the current developments in the commodities market

Introduction

Ever since the dawn of civilization, commodity trading has occupied an integral place in the lives of mankind. The very reason for this lies in the fact that commodities represent the fundamental elements of utility for human beings. The term, commodity, refers to any material, which can be bought and sold. Commodities in a market's context refer to any movable property other than actionable claims, money and securities. Over the years, commodities markets have been experiencing tremendous progress, which is evident from the fact that the trade in this

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segment is standing as the boon for the global economy today. The promising nature of these markets has made them an attractive investment avenue for investors.

In the early days people followed a mechanism for trading called barter system, which involves exchange of goods for goods. This was the first form of trade between individuals. The absence of a commonly accepted medium of exchange had initiated the need for the barter system. People used to buy those commodities, which they lacked and sell those commodities, which they had in excess. The commodities trade is believed to have its genesis in ancient Sumeria. The early commodity contracts were carried out using clay tokens as medium of exchange. Animals are believed to be the first commodities, which were traded, between individuals. The internationalization of commodities trade can be better understood by observing the commodity market integration occurred after the European voyages of discovery. The development of international commodities trade is characterized by the increase in volumes of trade across the nations and the convergence and price related to the identical commodities at different markets. The major thrust for the commodities trade was provided by the changes in demand patterns, scarcity and the supply potential, both within and across the nations.

13.1 The Indian Connection

Commodity derivatives in India have had a chequered history. Though the derivative markets survived the prohibition inflicted from time to time, thanks largely to the grey markets; the participants have not been able to shrug off the scare of the markets being banned any time in future. It is not surprising that these markets have not developed as much as the markets in developed countries or even the securities market in our own country. The exchanges emerging from an earlier suffocating environment are crying to breathe in a free and liberal regulatory and policy environment. This article attempts to give an overview of the developments in the commodity derivative markets and tries to explain the rationale for this, what in the present times may, perhaps, be considered as, obscurantist and retrograde approach, in an era of detailed regulation.

Coming back to the Indian scenario, despite a long history of commodity markets, in India, they are still in their initial stages of development. The essential contributors of this scenario include stringent regulatory restrictions and intermediate ban on commodity trading and policy interventions by the government. Commodity markets have a huge potential in the Indian context particularly because of the agri-based economy. With the government's initiative for agricultural liberalization, commodities' trading in India has gained increased momentum in activities. To increase the efficiency of the markets the Forward Markets Commission (FMC), the governing body of commodities trading in India has taken several initiatives for the establishment of national level multi-commodity exchanges in India. These exchanges serve as platforms for facilitating transparent trading, trading in multiple commodities, electronic delivery systems and efficient regulatory mechanisms, creating a world-class environment for Indian traders. In order to sustain the increasing volumes in commodities trade, the need for proper clearing and settlement systems, warehousing facilities and efficient pricing mechanisms has been identified. With the recent boom in commodities markets, Indian participants are gearing up for exploiting the potential opportunities in the future.

Commodity markets are of great help not only for their participants but also the economy as a whole. The twenty-year bear market for commodities has drastically reduced the prices of many commodities to their lowest levels. The present shift in trend in commodity trading complimented by the global increase in demand will certainly hold a promising future for the investments in this segment.

Notes

Notes The goods those are unbranded and are commonly traded in the market come under commodities.

13.1.1 Commodity Trading

Commodity markets are quite like equity markets. The commodity market also has two constituents i.e. spot market and derivative market. In case of a spot market, the commodities are bought and sold for immediate delivery. In case of a commodities derivative market, various financial instruments having commodities as underlying are traded on the exchanges. It has been seen that traditionally in India, people have hedged their risks with gold and silver.

13.1.2 The Indian Commodity Market

India, a commodity-based economy where two-thirds of the one billion populations depend on agricultural commodities, surprisingly has an underdeveloped commodity market. Unlike the physical market, futures markets trades in commodity are largely used as risk management (hedging) mechanism on either physical commodity itself or open positions in commodity stock For instance, a jeweller can hedge his inventory against perceived short-term downturn in gold prices by going short in the future markets.

Commodity Derivative markets started in India in Cotton in 1875 and in oilseeds in 1900 at Bombay. Forward trading in raw jute and jute goods started at Calcutta in 1912. Forward Markets in wheat had been functioning at Hapur in 1913 and in bullion at Bombay since 1920. In 1919, the then Government of Bombay passed the Bombay Contract Control (War Provision) Act and set up the Cotton Contracts Board. With a view to restricting speculative activity in cotton market, the Government of Bombay issued an ordinance in September 1939 prohibiting option business. The Bombay Options in Cotton Prohibition Act, 1939, later replaced the ordinance. In 1943, the Defence of India Act was utilized on large scale for the purpose of prohibiting forward trading in some commodities and regulating such trading in others on an all-India basis. In the same year, oilseeds forward contracts prohibition order was issued and forward contracts in oilseeds were banned. Similarly, orders were issued banning forward trading in food-grains, spices, vegetable oils, sugar and cloth. These orders were retained with necessary modifications in the Essential Supplies Temporary Powers Act 1946, after the Defence of India Act had lapsed. With a view to evolving the unified systems, the Government of Bombay enacted the Bombay Forward Contract Control Act 1947.

Commodities actually offer immense potential to become a separate asset class for market-savvy investors, arbitrageurs and speculators. Retail investors, who claim to understand the equity markets, may find commodities an unfathomable market. But commodities are easy to understand as far as fundamentals of demand and supply are concerned. Retail investors should understand the risks and advantages of trading in commodities futures before taking a leap. Historically, pricing in commodities futures has been less volatile compared with equity and bonds, thus providing an efficient portfolio diversification option.

In fact, the size of the commodities markets in India is also quite significant. Of the country's GDP of ₹ 13, 20,730 crore (₹ 13,207.3 billion), commodities-related (and dependent) industries constitute about 58%. Currently, the various commodities across the country clock an annual turnover of ₹ 1, 40,000 crore (₹ 1,400 billion). With the introduction of futures trading, the size of the commodities market is likely to grow manifold from here on.

Notes

Self Assessment

Fill in the blanks:

1. Commodity markets have a huge potential in the Indian context particularly because of the ..... economy.
2. With the government's initiative for agricultural ....., commodities' trading in India has gained increased momentum in activities.
3. Any goods that are unbranded and are commonly traded in the market come under.....
4. In case of a ..... market, the commodities are bought and sold for immediate delivery.
5. ..... investors should understand the risks and advantages of trading in commodities futures before taking a leap.

13.2 Commodity and Currency Derivatives – Introduction

The Indian economy is witnessing a mini revolution in commodity derivatives and risk management. Commodity options trading and cash settlement of commodity futures had been banned since 1952 and until 2002; commodity derivatives market was virtually non-existent, except for some negligible activity on an OTC basis. As on September 2005, the country had 3 national level electronic exchanges and 21 regional exchanges for trading commodity derivatives. As many as eighty (80) commodities have been allowed for derivatives trading. The value of trading has been booming and was slated to cross the $ 1 trillion mark in 2006 and, if all goes well, seems set to touch $5 trillion in a few years. This unit analyses questions such as: how did India pull it off in such a short time since 2002? Is this progress sustainable? What are the obstacles that need urgent attention, if the market is to realize its full potential?

13.2.1 Commodities Future

Commodity future is a derivative instrument for the future delivery of a commodity on a fixed date at a particular price. The underlying in this case is a particular commodity.

If an investor purchases an oil future, he is entering into a contract to buy a fixed quantity of oil at a future date. The future date is called the contract expiry date. The fixed quantity is called the contract size. These futures can be bought and sold on the commodity exchanges.

The commodities include agricultural commodities like wheat, rice, tea, jute, spices, soya, groundnut, coffee, rubber, cotton, etc, precious metals – gold and silver, base metals – iron ore, lead, aluminium, nickel, zinc etc, and energy commodities – crude oil and coal.

Did u know? The number of retail investors participating in the market is increasing gradually after the introduction of commodities futures. The expected growth rate of commodity market is 40% annually over the next five years.

13.2.2 Benefits of Commodities Futures

The following are the benefits of commodities futures:

- ***To producer:*** A producer of a commodity can sell the futures of the commodity, thereby ensuring that he can sell a particular quantity of his commodity at a particular price at a particular date.

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- ***To investors:*** An investor has alternative investment instruments where he can take a position as to future price and the spot price at a particular date in future and buys and sells options. He is not interested in taking deliveries of the commodities.
- ***To commodity trader:*** A commodity trader can use these to ensure that he is protected against any adverse changes in the prices. He can enter into a futures contract for purchase of a certain quantity of the underlying at a particular price on a particular date, or he can enter into a futures contract for sale of a particular quantity on a particular date at a particular price and be assured of the margins because both his purchase price as well as the sale price are fixed. Traders do a good arbitrage in gold and silver. Whenever they find gold moving up, they short silver and similarly whenever they find silver moving up and gold likely to move down, they hedge.
- ***To exporters:*** Futures trading is very useful to the exporters as it provides an advance indication of the price likely to prevail, help the exporter in quoting a realistic price and thereby secure export contracts in a competitive market. Having entered into an export contract, it enables exporters to hedge theirs risk by operating in futures market.

Caution Option trading in commodity is, however, presently prohibited.

Self Assessment

Fill in the blanks:

6. Commodity future is a ..... instrument for the future delivery of a commodity on a fixed date at a particular price.
7. The number of retail investors participating in the market is increasing gradually after the introduction of commodities .....
8. Futures trading is very useful to the exporters as it provides an advance indication of the price likely to .....
9. A ..... of a commodity can sell the futures of the commodity, thereby ensuring that he can sell a particular quantity of his commodity at a particular price at a particular date.

Task What is the need for the exchange-traded commodity derivatives market?

13.3 Legal Framework

After Independence, the Constitution of India adopted by Parliament on 26th January, 1950 placed the subject of "Stock Exchanges and Futures Market" in the Union list and therefore the responsibility for regulation of forward contracts devolved on Government of India. The Parliament passed the Forward Contracts (Regulation) Act, 1952 which presently regulates forward contracts in commodities all over India. The features of the Act are as follows:

The Act applies to goods, which are defined as any movable property other than security, currency, actionable claims.

Notes

13.3.1 Policy Liberalisation

Forward trading was banned in 1960 except for pepper, turmeric, castor seed and linseed. Futures trading in castor seed and linseed were suspended in 1977. Apparently, on the basis of the recommendations made by Khusro Committee, forward trading in Potato and Gur was allowed in the early 1980s and in castor seed in 1985. After the process of liberalization of the economy began in 1990, the government set up a committee under the chairmanship of Prof. K. N. Kabra in 1993 to examine the role of futures trading in the context of liberalisation and globalization. The Kabra Committee recommended allowing futures trading in 17 commodity groups. It also recommended strengthening of Forward Markets Commission and amendments to Forward Contracts (Regulation) Act, 1952. The major amendments include allowing options in goods, increase in the outer limit for delivery, payment from 11 days to 30 days for the contract to remain ready delivery contract and registration of brokers with the Forward Markets Commission. The government accepted most of these recommendations and futures trading have been permitted in all recommended commodities except bullion and basmati rice. Additional staff was provided to the FMC and the post of Chairman was upgraded to the level of Additional Secretary to the Government of India. The recommendations to set up Regional office at Lucknow, Delhi and Kochi were kept in abeyance for the time being. In the para 44 of the National Agricultural Policy announced by the government in the year 1999, it was stated that the government would enlarge the coverage of futures market to minimize the wide fluctuations in commodity prices, as also for hedging their risk. It was mentioned that an endeavour would be to cover all important agricultural products under futures trading in the course of time. An expert committee on agricultural marketing headed by Shankerlal Guru recommended linkage of spot and forward markets, introduction of electronic warehouse receipt system, inclusion of more and more commodities under futures trading and promotion of national system of warehouse receipt. The sub-group on forward and futures markets formed under the chairmanship of Dr. Kalyan Raipuria, Economic Adviser, and Department of Consumer Affairs to examine the feasibility of implementing the recommendations made by the Expert Committee chaired by Shankerlal Guru recommended that the commodity specific approach to the grant of recognition should be given up. Those exchanges, which meet the criteria to be stipulated by the Government, should be able to trade contracts in any permitted commodity. In his budget speech of 28th February 2002, the Finance Minister announced expansion of futures and forward trading to cover all agricultural commodities. The economic survey for the year 2000-2001 indicated the government's intention to allow futures trading in bullion. The policy statements of the government indicate its resolve to introduce reforms in commodity sector. A number of initiatives were also taken to decontrol the spot markets in commodities. The number of commodities listed as essential commodities has been pruned down to 17.

Accordingly, the FMC imposed some of the regulatory measures being implemented in the developed markets like:

- Daily mark-to-market margining;
- Time stamping of trades;
- Notation of contracts and creation of trade guarantee fund;
- Back-office computerization for the existing single commodity Exchange and online trading for the new Exchanges;
- Demutualization for the new exchanges;
- One-third representation of independent directors on the boards of existing exchanges.

Notes

13.3.2 Wholesale Price Index

The Wholesale Price Index (WPI) has been the most commonly accepted price index in India. It signals the ups and downs of the commodity prices, in all trades and transactions taking place across the country. The updated WPI is available in every week, with the time lag between two weeks being reduced to the minimum possible level. It catches the price movements in an extensive manner. For all these qualities, it is the most prevalent price index in India. It is also viewed as an indicator of the inflation rate of our economy.

13.3.3 Commodity Export Scenario

India masters the global castor oil trade with its castor seed and oil products. The yearly export of commercial castor oil from India turns out to be around 2-2.4 lakh tons. India is known to be the fifth largest producer of aluminium in the globe. Indian aluminium has huge export potential as its production far exceeds its domestic demand.

The export market for Indian organic agricultural products is expanding rapidly. India's organic tea is world-famous for its taste and flavour. Tea, coffee, spices, rice, wheat, pulses, oil seeds, fruits and vegetables, cashew nut, cotton, herbal products are the major organic products being exported from India.

Did u know? The commodity market in India is growing rapidly with huge export potential. Though it is temporarily lagging behind the service sector in the matter of exports, it is sure to catch up within a few years.

Self Assessment

Fill in the blanks:

10. The …… has been the most commonly accepted price index in India. It signals the ups and downs of the commodity prices, in all trades and transactions taking place across the country.
11. Forward trading was banned in …… except for pepper, turmeric, castor seed and linseed.

13.4 Current Developments in this Market

The government has now allowed national commodity exchanges, similar to the BSE & NSE, to come up and let them deal in commodity derivatives in an electronic trading environment. These exchanges are expected to offer a nation-wide anonymous, order-driven, screen-based trading system for trading. The Forward Markets Commission (FMC) will regulate these exchanges.

Consequently, four commodity exchanges have been approved to commence business in this regard. They are:

- Multi Commodity Exchange of India Ltd. (MCX) located at Mumbai
- National Commodity and Derivatives Exchange Ltd. (NCDEX) located at Mumbai
- National Board of Trade (NBOT) located at Indore
- National Multi Commodity Exchange (NMCE) located at Ahmedabad.

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13.4.1 Need for an Exchange-traded Commodity Derivatives Market

The biggest advantage of having an exchange-based platform is the reach. A wider reach ensures greater participation, which results into a more efficient price discovery mechanism. In fact, it comes to a stage where the derivative market guides the spot market in terms of pricing.

Example: Imagine a soya wholesaler in Madhya Pradesh who, having bought the crop from the farmer, wishes to sell it to the oil refiners. To sell his crop he has to go to the local market at Indore. The price that he will get for his crop would be solely dependent upon the demand supply condition prevailing at that point of time at that market place. Also, as the number of players is less, there are chances of the prices being biased. In contrast, the prices in the futures market are determined not only by the local demand supply conditions but also by the global scenario. Add to that the view taken on a commodity by various sets of people depending upon different parameters such as technical analysis, political news, exchange rates etc. The price that is, thus, quoted can be safely regarded as the most efficient price.

13.4.2 Opportunities the Commodity Derivatives Provide for Investors

Futures contract in the commodities market, similar to equity derivatives segment, will facilitate the activities of speculation, hedging and arbitrage to all class of investors.

Speculation: It facilitates speculation by providing opportunity to people, although not involved with the commodity, to trade on the views in the movement of commodity prices. The speculative position is taken with a small margin amount that is paid to the exchange, and the contract can be squared-off anytime during the trading hours.

Hedging: For the people associated with the commodities, the futures market can provide an effective hedging mechanism against price movements.

For example, an oil-seed farmer may go short in oil-seed futures, thus 'locking' his sale price and in the process hedging against any adverse price movements. On the other hand, a processor of oil seeds may buy oil-seed futures and thus assure him a supply of oil-seeds at a predetermined price. Similarly the oil-seed processor may go short in oil futures, which may be bought by a wholesaler of oil.

Also, there is a saying that "gold shines when everything fails." Thus, gold can be used as a hedging tool against other investments.

Arbitrage: Traders may exploit arbitrage opportunities that arise on account of different prices between the two exchanges or between different maturities in the same underlying.

List of exchanges and their respective traded commodities is given below:

1.	Bhatinda Om & Oil Exchange Ltd., Bhatinda	Gur
2.	The Bombay Commodity Exchange Ltd., Mumbai	RBD Palmolive, Groundnut Oil, Sunflower Oil, Cottonseed, Safflower, Groundnut, Castor oil-Int'l, Castor seed, Cottonseed oil, Seasum oil, Seasum Oilcake, Safflower, Oilcake, Rice Bran, Rice Bran Oil, Rice Bran Oilcake, Safflower Oil, Crude Palm Oil
3.	The Rajkot Seeds Oil & Bullion Merchants` Association Ltd.	Groundnut Oil, Castor seed
4.	The Meerut Agro Commodities Exchange Co. Ltd., Meerut	Gur
5.	The Spices and Oilseeds Exchange Ltd.	Turmeric

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6.	Ahmedabad Commodity Exchange Ltd	Cotton seed Castor seed
7.	Vijay Beopar Chamber Ltd., Muzaffarnagar	Gur Mustard Seed
8.	India Pepper & Spice Trade Association, Kochi	Pepper Domestic-MG1 Pepper Domestic-500g/l Black Pepper Int'l-MLS ASTA Black Pepper Int'l-VB ASTA Black pepper Int'l FAQ Pepper 550 G/L Rubber RSS4
9.	Rajdhani Oils and Oilseeds Exchange Ltd., Delhi	Gur Rapeseed/Mustard seed
10.	National Board of Trade, Indore	Rapeseed/Mustard seed Rapeseed/Mustard seed Oil Rapeseed/Mustard seed oil-Cake Soyabean Soy Meal Soy Oil Crude Palm Oil
11.	The Chamber of Commerce, Hapur	Gur Rapeseed/Mustard seed
12.	The East India Cotton Association Mumbai.	Indian Cotton
13.	The Central India Commercial Exchange Ltd, Gwalior	Gur Rapeseed/Mustard seed
14.	The East India Jute & Hessian Exchange Ltd,	Hessian Sacking
15.	First Commodity Exchange of India Ltd, Kochi	Copra, Coconut oil, Copra cake
16.	Bikaner Commodity Exchange Ltd.,Bikaner	Rapeseed/Mustard seed Rapeseed/Mustard seed Oil Rapeseed/Mustard seed oil-Cake, Guar seed, Gram, Guar Gum
17.	E-sugar India Limited.	Sugar Grade - M Sugar Grade - S
18.	National Multi Commodity Exchange of India Limited.	Gur, RBD Pamolein, Groundnut Oil, Sunflower Oil, Rapeseed/Mustardseed, Rapeseed/Mustardseed Oil, Rapeseed/Mustardseed oil-Cake, Soy bean, Soy Oil, Copra, CottonSeed, Safflower, Groundnut, Sugar, Sacking, Coffee-Robusta Cherry AB, Coconut oil, Castorseed, Castor-oil, Groundnut oilCack, Cottonseed oil, Sesame (Til or Jiljili), Sesame oil, Sesame, Oilcake, Safflower Oilcake, Rice Bran Oil, Safflower Oil, Sunflower Oilcake, Sunflower Seed, Pepper, Crude Palm Oil, Guar seed, Castor Oilcake, Cottonseed – Oilcake, Aluminium Ingots, Nickel, Vanaspati, Soybean Oilcake, Rubber, Copper, Zinc, Lead, Tin, Linseed, Linseed Oil, Linseed Oilcake, Coconut Oilcake, Gram, Gold, Silver, Rice, Wheat, Cardamom, Kilo – Gold, Masoor, Urad, Tur/Arhar, Moong, Rapeseed – 42, Raw Jute, Coffee-Arabica Plantation A

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19.	Surendranagar Cotton oil & Oilseeds Association Ltd,	Kapas Cottonseed Cotton bales
20.	Multi Commodity Exchange of India Ltd.	Gur RBD Pamolein Groundnut Oil Rapeseed/Mustard seed Oil Pepper Domestic-MG1 Soy bean Kapas Soya Meal Cotton seed Turmeric Castor seed Castor-oil Crude Palm Oil Guar seed Cottonseed - Oilcake Nickel Rubber Copper Tin Gram Sugar Grade - M Sugar Grade - S Gold Silver Gold-M Rice Wheat Ref Soya oil - Indore Urad Tur / Arhar Guar Gum Castor seed-5 Silver-M Steel - Flat Steel - Long Yellow Peas Long Staple Cotton Medium Staple Cotton Castor seed - Disa Mustard Seed Guar seed Bandhani Gold - HNI Silver - HNI Red Chilly Maize Guar Gum Bandhani Cashew Kernel W320 Basmati Rice Jeera Mustard Seed Jaipur Crude Oil Sarbati Rice Sesame Seed (Natural 99.1) Cotton Long Kadi Cotton Med Abohar Cotton Short Staple Steel Long Bhavnagar Mentha Oil

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21.	National Commodity & Derivatives Exchange Ltd.	S06 L S Cotton Ahmedabad J34 M S Cotton Bhatinda Crude palm oil - Kandla RBD Pamolein - Kakinada EXP R/M oil - Jaipur Rape/Mustard seed - Jaipur Ref Soya oil - Indore Soy bean - Indore Pure Gold - Mumbai Pure Silver - New Delhi Pure Gold - Mumbai - 1 Kg Pure Silver - New Delhi - 30 Kg (Mega) Rubber - Kottayam Pepper - Kochi Gram (Chana) - New Delhi Guar seed - Jodhpur Jute (B twill-665 gms) - Kolkata Turmeric - Nizamabad Castor seed - Disa Raw Jute - Kolkata Guar Gum - Jodhpur Sugar M Grade - Muzaffarnagar Urad - Mumbai Sugar S Grade - Vashi Yellow Peas - Mumbai Wheat - New Delhi SMQ Soya Meal - Indore SONA995MUM CHANDIDEL Cotton Kadi Cotton Abohar Gur chaku - Muzaffarnagar Yellow Red Maize - Nizamabad Grade A Raw Rice - Delhi Grade A Parboiled Rice - Delhi Common Raw Rice - Delhi Common Parboiled Rice - Delhi Mulberry Raw Silk Mulberry Green Cocoons Jeera Unjha Chilli (Paala) Guntur Mild Steel Ingots - Ghaziabad Cashews W-320 - Kollam Whitish Sesame Seed - Rajkot Cotton Seed Oilcake - Akola Lemon Tur - Mumbai Maharashtra Lal Tur - Akola Arabica Coffee - Hassan Robusta Coffee - Kushalnagar
22.	Haryana Commodities Ltd., Hissar	Rapeseed/Mustard seed Rapeseed/Mustard seed oil

Task Why the percentage of delivery ratio is very low in the exchange based commodity derivatives?

Notes

Exhibit 13.1: Multi-Commodity Exchange of India Limited (MCX)

MCX an independent and demutualised multi-commodity exchange has permanent recognition from the Government of India for facilitating online trading, clearing and settlement operations for commodity futures markets across the country. Key shareholders of MCX are Financial Technologies (India) Ltd., State Bank of India, NABARD, NSE, HDFC Bank, State Bank of Indore, State Bank of Hyderabad, State Bank of Saurashtra, SBI Life Insurance Co. Ltd., Union Bank of India, Bank Of India, Bank Of Baroda, Canara Bank, Corporation Bank. Headquartered in Mumbai, MCX is led by an expert management team with deep domain knowledge of the commodity futures markets. Through the integration of dedicated resources, robust technology and scalable infrastructure, since inception MCX has recorded many first to its credit. Inaugurated in November 2003 by Mukesh Ambani, Chairman & Managing Director, Reliance Industries Ltd., MCX offers futures trading in the following commodity categories: agri-commodities, bullion, metals – ferrous and non-ferrous, pulses, oils & oilseeds, energy, plantations, spices and other soft commodities.

MCX has built strategic alliances with some of the largest players in commodities eco-system, namely, Bombay Bullion Association, Bombay Metal Exchange, Solvent Extractors' Association of India, Pulses Importers Association, Shetkari Sangathan, United Planters Association of India and India Pepper and Spice Trade Association. Today, MCX offers spectacular growth opportunities and advantages to a large cross section of the participants including producers/processors, traders, corporates, regional trading centres, importers, exporters, cooperatives, industry associations, amongst others. MCX being a nation-wide commodity exchange offers multiple commodities for trading with a wide reach and penetration and robust infrastructure, and is well placed to tap this vast potential.

Source: http://www.mcxindia.com

Exhibit 13.2: National Commodity & Derivatives Exchange Limited (NCDEX)

National Commodity & Derivatives Exchange Limited (NCDEX) is a professionally managed online multi-commodity exchange promoted by ICICI Bank Limited (ICICI Bank), Life Insurance Corporation of India (LIC), National Bank for Agriculture and Rural Development (NABARD) and National Stock Exchange of India Limited (NSE). Punjab National Bank (PNB), CRISIL Limited (formerly the Credit Rating Information Services of India Limited), Indian Farmers Fertiliser Cooperative Limited (IFFCO) and Canara Bank by subscribing to the equity shares have joined the initial promoters as shareholders of the Exchange. NCDEX is the only commodity exchange in the country promoted by national level institutions. This unique parentage enables it to offer a bouquet of benefits, which are currently in short supply in the commodity markets. The institutional promoters of NCDEX are prominent players in their respective fields and bring with them institutional building experience, trust, nationwide reach, technology and risk management skills. NCDEX is a public limited company incorporated on April 23, 2003 under the Companies Act 1956. It obtained its Certificate for Commencement of Business on May 9, 2003. It has commenced its operations on December 15, 2003.

NCDEX is a nation-level, technology driven demutualized on-line commodity exchange with an independent Board of Directors and professionals not having any vested interest in commodity markets. It is committed to provide a world-class commodity exchange platform for market participants to trade in a wide spectrum of commodity derivatives driven by best global practices, professionalism and transparency.

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NCDEX is regulated by Forward Market Commission in respect of futures trading in commodities. Besides, NCDEX is subjected to various laws of the land like the Companies Act, Stamp Act, Contracts Act, Forward Commission (Regulation) Act and various other legislations, which impinge on its working. NCDEX is located in Mumbai and offers facilities to its members in more than 390 centres throughout India. The reach will gradually be expanded to more centres. NCDEX currently facilitates trading of thirty six commodities – cashew, castor seed, chana, chilli, coffee, cotton, cotton seed oilcake, crude palm oil, expeller mustard oil, gold, guar gum, guar seeds, gur, jeera, jute sacking bags, mild steel ingot, mulberry green cocoons, pepper, rapeseed, mustard seed, raw jute, RBD palmolive, refined soya oil, rice, rubber, sesame seeds, silk, silver, soyabean, sugar, tur, turmeric, urad (black matpe), wheat, yellow peas, yellow red maize and yellow soybean meal. At subsequent phases trading in more commodities would be facilitated.

Source: http://www.ncdex.com

13.4.3 Top 10 Commodities

Taking together the turnover in commodities futures seen at the above three multi-commodity exchanges during the two-week period 15-09-2005 to 30-09-2005, the following emerge as the top-10 commodities in terms of value of futures trading done.

Table 13.1: Top 10 Commodities for Futures Trading

Commodity	Turnover in $ Millions
Guar seed	4,432.71
Gold	4,082.15
Silver	3,869.36
Crude oil	3,380.13
Chana (chick peas)	2,100.15
Urad (Black Legume)	624.71
Soya oil	478.28
Gur (Jaggery: cane sugar)	369.72
Guar Gum	345.08
Tur (Lentils)	329.35

Note: The local currency values were translated into USD using the monthly average exchange rate INR43.8445 per USD prevailing in September 2005.

Self Assessment

Fill in the blanks:

12. The biggest advantage of having an exchange-based platform is the ……...
13. A wider reach ensures greater participation, which results into a more efficient ……... discovery mechanism.
14. ……... facilitates speculation by providing opportunity to people, although not involved with the commodity.
15. Traders may exploit ……... opportunities that arise on account of different prices between the two exchanges or between different maturities in the same underlying.

Notes

Case Study

Sugar Futures Range-bound; Stockists Still Buying

Securities Tax Damaging

The rationale for introduction of STT in 2004 was mainly to track transactions and minimise tax avoidance. This move might have helped at that point of time, as tax infrastructure was weak and helped mop up higher revenues with higher bouyancy. The other rationale for introduction of transaction tax is that it is expected to reduce speculation and volatility, and help markets discover efficient prices.

However, in the empirical literature, there are no widely agreeable conclusions that support such an argument. At least, it is very difficult to establish that post-STT in India, both speculation and volatility has reduced in Indian stock markets. But the adverse impact of such taxes on trading volumes has been established by many studies.

This is found to have resulted in reduction in tax base as well as tax revenues. At the same time, it discourages small savers and new participants from entering the market. Compared with 2004, now India has a much better tax infrastructure. It is not clear how far STT can still help reduce tax avoidance. This calls for a rigorous cost-benefit analysis of such policies.

Recently, banks and others have argued for introducing CTT, so as to provide a level playing field among all segments of financial markets. This would be more ruinous. While acknowledging that banks are not allowed to enter the commodities market — although they should have been — the alternative cannot be introduction of CTT.

There is no clear justification for introduction of CTT in India. The role of commodities markets is quite different from securities markets; the former is more linked to the real economy than the latter.

Real Economy Linkages

Unlike securities market, particularly the secondary market, commodity markets play a major role in price discovery, and at the same time help both producers and consumers hedge their risks, which are the basic functions of any futures market. They also help formalise the otherwise hugely informal commodity markets that were deriving inefficient prices and eroding the tax revenue base.

In India, although the volumes in the commodity market have increased over the period, the participants' base is still low. The transmission mechanism of prices and risks from the futures market to producers are still evolving. With regular intervention in the market (which is not there in securities market) and the low base of informed participants, these markets need to be developed further with a better regulatory framework.

Moreover, this segment of the market is already disadvantaged by issues such as the absence of tax exemption (both on income and capital gains), limited participation, among other things. The median tax on the commodities traded is at 19.55 per cent, which is very high. Any introduction of CTT at this stage could potentially result in undesirable and not-so-efficient outcomes.

Food Inflation Effects

High food inflation since 2007 has been attributed to so-called speculative trading in commodities market. Hence, it was argued that there is a case for introduction of CTT.

Contd...

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The Abhijit Sen committee, which was constituted to look into this issue, suggested that the role of futures trading on spot market around that time was inconclusive.

This actually suggests that futures and spot markets are not related, which defies the anticipated and fundamental role of commodity futures. Our own analysis based on recent data (CDE-DSE Working Paper-219) shows that the presence of futures market indeed reduced the price volatility and ensured smooth transmission of exogenous shocks to spot markets.

Further, both markets are found to be co-integrated, satisfying the basic fundamental objective. Many studies have shown that the recent surge in food inflation is largely due to structural factors, some are policy induced, and not due to the futures market. With this background, calling for ban on trading of some commodities and advocating CTT defies logic.

The Exchanges, on their part, need to take up the responsibility for enhancing financial literacy, help in widening the market and smoothening information flow.

To sum up, with a robust tax infrastructure, any transaction tax (either STT or CTT) that is intended to contain tax avoidance would end up with adverse consequences. This is more so in the case of CTT, where markets are still evolving and have a larger role to play than securities market.

Given current economic conditions, where the confidence in the financial markets are low, it is important to provide confidence-building measures that broaden the market base, and encourage savings to be channelled to the real sector through financial markets.

It is also time for bringing in well-regulated instruments, rather than introduce hurdles in financial sector development. Introduction of CTT would increase costs and constrict the market.

Questions

1. What is the rational behind the introduction of STT?
2. What is the difference between STT and CTT?

Source: http://www.thehindubusinessline.com/opinion/commodities-transaction-tax-undesirable/article4432300.ece

13.5 Summary

- Any goods that are unbranded and are commonly traded in the market come under commodities. Commodity markets are quite like equity markets.
- The commodity market also has two constituents i.e. spot market and derivative market. In case of a spot market, the commodities are bought and sold for immediate delivery.
- India, a commodity based economy where two-thirds of the one billion population depend on agricultural commodities, surprisingly has an underdeveloped commodity market.
- Unlike the physical market, futures markets trades in commodity are largely used as risk management (hedging) mechanism on either physical commodity itself or open positions in commodity stock For instance, a jeweller can hedge his inventory against perceived short-term downturn in gold prices by going short in the future markets.
- After Independence, the Constitution of India adopted by Parliament on 26th January, 1950 placed the subject of "Stock Exchanges and Futures Market" in the Union list and

Notes

therefore the responsibility for regulation of forward contracts devolved on the Government of India.

- The Parliament passed the Forward Contracts (Regulation) Act, 1952 which presently regulated forward contracts in commodities all over India. The features of the Act are as follows: The Act applies to goods, which are defined as any movable property other than security, currency, actionable claims.
- The Wholesale Price Index (WPI) has been the most commonly accepted price index in India.
- It signals the ups and downs of the commodity prices, in all trades and transactions taking place across the country.
- Futures contract in the commodities market, similar to equity derivatives segment, will facilitate the activities of speculation, hedging and arbitrage to all class of investors.

13.6 Keywords

Commodity: Any goods that are unbranded and are commonly traded in the market

Commodity Future: It is a derivative instrument for the future delivery of a commodity on a fixed date at a particular price.

Forward Contracts (Regulation) Act, 1952: The Act applies to goods, which are defined as any movable property other than security, currency, actionable claims.

MCX: This is an independent and demutualised multi-commodity exchange has permanent recognition from the Government of India for facilitating online trading, clearing and settlement operations for commodity futures markets across the country.

National Commodity & Derivatives Exchange Limited (NCDEX): NCDEX is a professionally managed online multi-commodity exchange promoted by ICICI Bank Limited (ICICI Bank), Life Insurance Corporation of India (LIC), National Bank for Agriculture and Rural Development (NABARD) and National Stock Exchange of India Limited (NSE).

Speculation: It facilitates speculation by providing opportunity to people, although not involved with the commodity, to trade on the views in the movement of commodity prices.

Wholesale Price Index (WPI): It signals the ups and downs of the commodity prices, in all trades and transactions taking place across the country.

13.7 Review Questions

1. What is the commodity market?
2. How old are the commodities market?
3. What are the different types of commodities that are traded in these markets?
4. What are the different segments in the commodities market?
5. What are the characteristics of Over-The-Counter (OTC) commodity markets?
6. What are the characteristics of the exchange-traded markets?
7. Do the commodity exchanges facilitate delivery?
8. What is the size of the commodities market as compared to the equity market?

Notes

9. What is the history of commodities markets in India?
10. What are the current developments in commodities market?

Answers: Self Assessment

1.	Agri-based	2.	liberalization
3.	Commodities	4.	Spot
5.	Retail	6.	Derivative
7.	Futures	8.	Prevail
9.	Producer	10.	Wholesale Price Index (WPI)
11.	1960	12.	Reach
13.	Price	14.	Speculation
15.	Arbitrage		

13.8 Further Readings

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http://www.mcxindia.com/

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Unit 14: Currency/Forex Market

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Objectives

After studying this unit, you will be able to:

- Explain the forex market
- Discuss how to read a quote and understanding the jargon
- Elaborate the history and market participants
- Discuss the economic theories and data

Introduction

Foreign exchange (forex or FX for short) is one of the most exciting, fast-paced markets around. Until recently, trading in the forex market had been the domain of large financial institutions, corporations, central banks, hedge funds and extremely wealthy individuals. The emergence of the internet has changed all of this, and now it is possible for average investors to buy and sell currencies easily with the click of a mouse.

Daily currency fluctuations are usually very small. Most currency pairs are moveless than one cent per day, representing a less than 1 % change in the value of the currency. This makes foreign exchange one of the least volatile financial markets around. Therefore, many speculators rely on

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the availability of enormous leverage to increase the value of potential movements. In the forex market, leverage can be as much as 250:1. Higher leverage can be extremely risky, but because of round-the-clock trading and deep liquidity, foreign exchange brokers have been able to make high leverage an industry standard in order to make the movements meaningful for FX traders.

Extreme liquidity and the availability of high leverage have helped to spur the market's rapid growth and made it the ideal place for many traders. Positions can be opened and closed within minutes or can be held for months. Currency prices are based on objective considerations of supply and demand and cannot be manipulated easily because the size of the market does not allow even the largest players, such as central banks, to move prices at will.

The forex market provides plenty of opportunity for investors. However, in order to be successful, a currency trader has to understand the basics behind currency movements. The goal of this unit is to provide a foundation for the currency markets.

14.1 The Forex Market

The foreign exchange market is the "place" where currencies are traded. Currencies are important to most people around the world, whether they realize it or not, because currencies need to be exchanged in order to conduct foreign trade and business. If you are living in the U.S. and want to buy cheese from France, either you or the company that you buy the cheese from has to pay the French for the cheese in euros (EUR). This means that the U.S. importer would have to exchange the equivalent value of U.S. dollars (USD) into euros. The same goes for travelling. A French tourist in Egypt can't pay in euros to see the pyramids because it's not the locally accepted currency. As such, the tourist has to exchange the euros for the local currency, in this case the Egyptian pound, at the current exchange rate.

The need to exchange currencies is the primary reason why the forex market is the largest, most liquid financial market in the world. It dwarfs other markets in size, even the stock market, with an average traded value of around U.S. $2,000 billion per day. (The total volume changes all the time, but as of April 2004, the Bank for International Settlements (BIS) reported that the forex market traded U.S. $1,900 billion per day.)

One unique aspect of this international market is that there is no central marketplace for currency exchange. Rather, trade is conducted electronically over-the-counter (OTC), which means that all transactions occur via computer networks between traders around the world, rather than on one centralized exchange. The market is open 24 hours a day, five and a half days a week, and currencies are traded worldwide in the major financial centres of London, New York, Tokyo, Zurich, Frankfurt, Hong Kong, Singapore, Paris and Sydney – across almost every time zone. This means that when the trading day in the U.S. ends, the forex market begins anew in Tokyo and Hong Kong. As such, the forex market can be extremely active any time of the day, with price quotes changing constantly.

14.1.1 Spot Market and the Forwards and Futures Markets

There are actually three ways that institutions, corporations and individuals trade forex: the spot market, the forwards market and the futures market. The spot market always has been the largest market because it is the "underlying" real asset that the forwards and futures markets are based on. In the past, the futures market was the most popular venue for traders because it was available to individual investors for a longer period of time. However, with the advent of electronic trading, the spot market has witnessed a huge surge in activity and now surpasses the futures market as the preferred trading market for individual investors and speculators. When people refer to the forex market, they usually are referring to the spot market. The forwards and

futures markets tend to be more popular with companies that need to hedge their foreign exchange risks out to a specific date in the future.

Spot Market

More specifically, the spot market is where currencies are bought and sold according to the current price. That price, determined by supply and demand, is a reflection of many things, including current interest rates, economic performance, sentiment towards ongoing political situations (both locally and internationally), as well as the perception of the future performance of one currency against another. When a deal is finalized, this is known as a "spot deal". It is a bilateral transaction by which one party delivers an agreed-upon currency amount to the counter party and receives a specified amount of another currency at the agreed-upon exchange rate value. After a position is closed, the settlement is in cash. Although the spot market is commonly known as one that deals with transactions in the present (rather than the future), these trades actually take two days for settlement.

Forwards and Futures Markets

Unlike the spot market, the forwards and futures markets do not trade actual currencies. Instead they deal in contracts that represent claims to a certain currency type, a specific price per unit and a future date for settlement.

In the forwards market, contracts are bought and sold OTC between two parties, who determine the terms of the agreement between themselves.

In the futures market, futures contracts are bought and sold based upon a standard size and settlement date on public commodities markets, such as the Chicago Mercantile Exchange. In the U.S., the National Futures Association regulates the futures market. Futures contracts have specific details, including the number of units being traded, delivery and settlement dates, and minimum price increments that cannot be customized. The exchange acts as a counterpart to the trader, providing clearance and settlement.

Both types of contracts are binding and are typically settled for cash for the exchange in question upon expiry, although contracts can also be bought and sold before they expire. The forwards and futures markets can offer protection against risk when trading currencies. Usually, big international corporations use these markets in order to hedge against future exchange rate fluctuations, but speculators take part in these markets as well.

Notes You'll see the terms: FX, forex, foreign-exchange market and currency market. These terms are synonymous and all refer to the forex market.

Self Assessment

Fill in the blanks:

1. The …….. is the "place" where currencies are traded.
2. The …….. market is where currencies are bought and sold according to the current price.
3. In the futures market …….. contracts are bought and sold based upon a standard size and settlement date on public commodities markets, such as the Chicago Mercantile Exchange.

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14.2 Reading a Quote and Understanding the Jargon

One of the biggest sources of confusion for those new to the currency market is the standard for quoting currencies. In this section, we'll go over currency quotations and how they work in currency pair trades.

14.2.1 Reading a Quote

When a currency is quoted, it is done in relation to another currency, so that the value of one is reflected through the value of another. Therefore, if you are trying to determine the exchange rate between the U.S. dollar (USD) and the Japanese yen (JPY), the quote would look like this:

USD/JPY = 119.50

This is referred to as a currency pair. The currency to the left of the slash is the base currency, while the currency on the right is called the quote or counter currency. The base currency (in this case, the U.S. dollar) is always equal to one unit (in this case, US$1), and the quoted currency (in this case, the Japanese yen) is what that one base unit is equivalent to in the other currency. The quote means that US$1 = 119.50 Japanese yen. In other words, US$1 can buy 119.50 Japanese yen.

Direct Quote vs. Indirect Quote

There are two ways to quote a currency pair, either directly or indirectly. A direct quote is simply a currency pair in which the domestic currency is the base currency; while an indirect quote, is a currency pair where the domestic currency is the quoted currency. So if you were looking at the Canadian dollar as the domestic currency and U.S. dollar as the foreign currency, a direct quote would be CAD/USD, while an indirect quote would be USD/CAD. The direct quote varies the foreign currency, and the quoted, or domestic currency, remains fixed at one unit. In the indirect quote, on the other hand, the domestic currency is variable and the foreign currency is fixed at one unit.

For example, if Canada is the domestic currency, a direct quote would be 0.85 CAD/USD, which means with C$1, you can purchase US$0.85. The indirect quote for this would be the inverse (1/0.85), which is 1.18 USD/CAD and means that USD$1 will purchase C$1.18.

In the forex spot market, most currencies are traded against the U.S. dollar, and the U.S. dollar is frequently the base currency in the currency pair. In these cases, it is called a direct quote. This would apply to the above USD/JPY currency pair, which indicates that US$1 is equal to 119.50 Japanese yen.

However, not all currencies have the U.S. dollar as the base. The Queen's currencies - those currencies that historically have had a tie with Britain, such as the British pound, Australian Dollar and New Zealand dollar – are all quoted as the base currency against the U.S. dollar. The euro, which is relatively new, is quoted the same way as well. In these cases, the U.S. dollar is the counter currency, and the exchange rate is referred to as an indirect quote. This is why the EUR/USD quote is given as 1.25, for example, because it means that one euro is the equivalent of 1.25 U.S. dollars.

Most currency exchange rates are quoted out to four digits after the decimal place, with the exception of the Japanese yen (JPY), which is quoted out to two decimal places.

Cross Currency

When a currency quote is given without the U.S. dollar as one of its components, this is called a cross currency. The most common cross currency pairs are the EUR/GBP, EUR/CHF and

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EUR/JPY. These currency pairs expand the trading possibilities in the forex market, but it is important to note that they do not have as much of a following (for example, not as actively traded) as pairs that include the U.S. dollar, which also are called the majors.

Bid and Ask

As with most trading in the financial markets, when you are trading a currency pair there is a bid price (buy) and an ask price (sell). Again, these are in relation to the base currency. When buying a currency pair (going long), the ask price refers to the amount of quoted currency that has to be paid in order to buy one unit of the base currency, or how much the market will sell one unit of the base currency for in relation to the quoted currency.

The bid price is used when selling a currency pair (going short) and reflects how much of the quoted currency will be obtained when selling one unit of the base currency, or how much the market will pay for the quoted currency in relation to the base currency.

The quote before the slash is the bid price, and the two digits after the slash represent the ask price (only the last two digits of the full price are typically quoted). Note that the bid price is always smaller than the ask price. Let's look at an example:

USD/CAD = 1.2000/05

Bid = 1.2000

Ask = 1.2005

If you want to buy this currency pair, this means that you intend to buy the base currency and are therefore looking at the ask price to see how much (in Canadian dollars) the market will charge for U.S. dollars. According to the ask price, you can buy one U.S. dollar with 1.2005 Canadian dollars.

However, in order to sell this currency pair, or sell the base currency in exchange for the quoted currency, you would look at the bid price. It tells you that the market will buy US$1 base currency (you will be selling the market the base currency) for a price equivalent to 1.2000 Canadian dollars, which is the quoted currency.

Whichever currency is quoted first (the base currency) is always the one in which the transaction is being conducted. You either buy or sell the base currency. Depending on what currency you want to use to buy or sell the base with, you refer to the corresponding currency pair spot exchange rate to determine the price.

Spreads and Pips

The difference between the bid price and the ask price is called a spread. If we were to look at the following quote: EUR/USD = 1.2500/03, the spread would be 0.0003 or 3 pips, also known as points. Although these movements may seem insignificant, even the smallest point change can result in thousands of dollars being made or lost due to leverage. Again, this is one of the reasons that speculators are so attracted to the forex market; even the tiniest price movement can result in huge profit.

The pip is the smallest amount a price can move in any currency quote. In the case of the U.S. dollar, euro, British pound or Swiss franc, one pip would be 0.0001. With the Japanese yen, one pip would be 0.01, because this currency is quoted to two decimal places. So, in a forex quote of USD/CHF, the pip would be 0.0001 Swiss francs. Most currencies trade within a range of 100 to 150 pips a day.

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Table 14.1: Currency Quote Overview

USD/CAD = 1.2232/37		
Base Currency	Currency to the left (USD)	
Quote/Counter Currency	Currency to the right (CAD)	
Bid Price	1.2232	Price for which the market maker will buy the base currency. Bid is always smaller than ask.
Ask Price	1.2237	Price for which the market maker will sell the base currency.
Pip	One point move, in USD/CAD it is .0001 and 1 point change would be from 1.2231 to 1.2232	The pip/point is the smallest movement a price can make.
Spread	Spread in this case is 5 pips/points; difference between bid and ask price (1.2237-1.2232).	

14.2.2 Currency Pairs in the Forwards and Futures Markets

One of the key technical differences between the forex markets is the way currencies are quoted. In the forwards or futures markets, foreign exchange always is quoted against the U.S. dollar. This means that pricing is done in terms of how many U.S. dollars are needed to buy one unit of the other currency. Remember that in the spot market some currencies are quoted against the U.S. dollar, while for others, the U.S. dollar is being quoted against them. As such, the forwards/futures market and the spot market quotes will not always be parallel one another.

Example: For example, in the spot market, the British pound is quoted against the U.S. dollar as GBP/USD. This is the same way it would be quoted in the forwards and futures markets. Thus, when the British pound strengthens against the U.S. dollar in the spot market, it will also rise in the forwards and futures markets.

On the other hand, when looking at the exchange rate for the U.S. dollar and the Japanese yen, the former is quoted against the latter. In the spot market, the quote would be 115 for example, which means that one U.S. dollar would buy 115 Japanese yen. In the futures market, it would be quoted as (1/115) or .0087, which means that 1 Japanese yen would buy .0087 U.S. dollars. As such, a rise in the USD/JPY spot rate would equate to a decline in the JPY futures rate because the U.S. dollar would have strengthened against the Japanese yen and therefore one Japanese yen would buy less U.S. dollars.

The Good and the Bad

We already have mentioned that factors such as the size, volatility and global structure of the forex market have all contributed to its rapid success. Given the highly liquid nature of this market, investors are able to place extremely large trades without affecting any given exchange rate. These large positions are made available to traders because of the low margin requirements

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used by the majority of the industry's brokers. For example, it is possible for an investor to control a position of US$100,000 by putting down as little as US$1,000 up front and borrowing the remainder from his or her broker. This amount of leverage acts as a double-edged sword because investors can realize large gains when rates make a small favourable change, but they also run the risk of a massive loss when the rates move against them. Despite the risks, the amount of leverage available in the forex market is what makes it attractive for many speculators.

The currency market is also the only market that is truly open 24 hours a day with decent liquidity throughout the day. For traders who may have a day job or just a busy schedule, it is an optimal market to trade in. As you can see from the chart below, the major trading hubs are spread throughout many different time zones, eliminating the need to wait for an opening or closing bell. As the U.S. trading closes, other markets in the East are opening, making it possible to trade at any time during the day.

Time Zone	Time (ET)
Tokyo Open	7:00 pm
Tokyo Close	4:00 am
London Open	3:00 am
London Close	12:00 pm
New York Open	8:00 am
New York Close	5:00 pm

While the forex market may offer more excitement to the investor, the risks are also higher in comparison to trading equities. The ultra-high leverage of the forex market means that huge gains can quickly turn to damaging losses and can wipe out the majority of your account in a matter of minutes. This is important for all new traders to understand, because in the forex market – due to the large amount of money involved and the number of players – traders will react quickly to information released into the market, leading to sharp moves in the price of the currency pair.

Though currencies don't tend to move as sharply as equities on a percentage basis (where a company's stock can lose a large portion of its value in a matter of minutes after a bad announcement), it is the leverage in the spot market that creates the volatility. For example, if you are using 100:1 leverage on $1,000 invested, you control $100,000 in capital. If you put $100,000 into a currency and the currency's price moves 1 % against you, the value of the capital will have decreased to $99,000 – a loss of $1,000, or all of your invested capital, representing a 100% loss. In the equities market, most traders do not use leverage, therefore a 1% loss in the stock's value on a $1,000 investment, would only mean a loss of $10. Therefore, it is important to take into account the risks involved in the forex market before diving in.

14.2.3 Differences between Forex and Equities

A major difference between the forex and equities markets is the number of traded instruments: the forex market has very few compared to the thousands found in the equities market. The majority of forex traders focus their efforts on seven different currency pairs: the four majors, which include (EUR/USD, USD/JPY, GBP/USD, USD/CHF); and the three commodity pairs (USD/CAD, AUD/USD, NZD/USD). All other pairs are just different combinations of the same currencies, otherwise known as cross currencies. This makes currency trading easier to follow because rather than having to cherry-pick between 10,000 stocks to find the best value, all that FX traders need to do is "keep up" on the economic and political news of eight countries.

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The equity markets often can hit a lull, resulting in shrinking volumes and activity. As a result, it may be hard to open and close positions when desired. Furthermore, in a declining market, it is only with extreme ingenuity that an equities investor can make a profit. It is difficult to short-sell in the U.S. equities market because of strict rules and regulations regarding the process. On the other hand, forex offers the opportunity to profit in both rising and declining markets because with each trade, you are buying and selling simultaneously, and short-selling is, therefore, inherent in every transaction. In addition, since the forex market is so liquid, traders are not required to wait for an uptick before they are allowed to enter into a short position – as they are in the equities market.

Due to the extreme liquidity of the forex market, margins are low and leverage is high. It just is not possible to find such low margin rates in the equities markets; most margin traders in the equities markets need at least 50% of the value of the investment available as margin, whereas forex traders need as little as 1%. Furthermore, commissions in the equities market are much higher than in the forex market. Traditional brokers ask for commission fees on top of the spread, plus the fees that have to be paid to the exchange. Spot forex brokers take only the spread as their fee for the transaction.

Caselet

Currency Wars May Boost Forex-market Trading, HSBC Says

HSBC strategists believe that the onset of a "currency war" would see foreign-exchange markets increase in importance to asset allocators.

The strategists said "the resurrection of the [idea of] currency wars has revived the prominence of foreign exchange as an appropriate asset class to express a view."

The term "currency war" refers to the situation where countries seek to devalue their "currency to boost their trading position against rivals.

Currencies had lost their allure as a pure-play asset-allocation tool, as investors struggled to work though the implications of unconventional easing", the HSBC strategists said.

"Global central banks injected massive amounts of liquidity into asset markets to support the global economy after the recent financial crisis, but with different results for currencies. Quantitative easing in the U.S proved to be U.S. dollar negative, but quantitative easing in the U.K. was neutral for the British pound", the strategists said.

"And the euro zone's long-term refinancing operations, popularly known as LTRO, eventually had a positive impacted on the euro", they said.

"Previously, it was far easier to express a quantitative-easing view via bonds or stocks", the strategists said.

However, in a "currency war" environment, foreign exchange suddenly "becomes the obvious way to express a given view," they said. "If countries are heading for conflict, foreign exchange will of course be the front line."

Offering the Japanese yen USDJPY +0.33% as an example, the strategists said that, if an investor believes Japan will succeed in weakening the yen, then the logical way to bet on that view is via the currency.

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> True, Japanese stocks may benefit from a weaker yen, but they "will not lead the way," HSBC said. Japanese bond-market investors, meanwhile, would be caught between additional buying from the Bank of Japan and the threat of an overly successful reflation, they said.
>
> – *Sarah Turner*

Source: http://blogs.marketwatch.com/thetell/2013/02/14/currency-wars-may-boost-forex-market-trading-hsbc-says/

Self Assessment

Fill in the blanks:

4. Direct quote is simply a currency pair in which the domestic currency is the …… currency.
5. An …… quote, is a currency pair where the domestic currency is the quoted currency.
6. When a currency quote is given without the U.S. dollar as one of its components, this is called a …… currency.
7. When buying a currency pair (going long), the …… price refers to the amount of quoted currency that has to be paid in order to buy one unit of the base currency.
8. The difference between the bid price and the ask price is called a ……
9. The …… is the smallest amount a price can move in any currency quote.

14.3 History and Market Participants

Given the global nature of the forex market, it is important to first examine and learn some of the important historical events relating to currencies and currency exchange before entering any trades. In this section the international monetary system and how it has evolved to its current state will we reviewed. The major players that occupy the forex market – something that is important for all potential forex traders to understand will also be discussed.

14.3.1 The History of the Forex: Gold Standard System

The creation of the gold standard monetary system in 1875 marks one of the most important events in the history of the forex market. Before the gold standard was implemented, countries would commonly use gold and silver as means of international payment. The main issue with using gold and silver for payment is that their value is affected by external supply and demand. For example, the discovery of a new gold mine would drive gold prices down.

The underlying idea behind the gold standard was that governments guaranteed the conversion of currency into a specific amount of gold, and vice versa. In other words, a currency would be backed by gold. Obviously, governments needed a fairly substantial gold reserve in order to meet the demand for exchanges. During the late nineteenth century, all of the major economic countries had defined an amount of currency to an ounce of gold. Over time, the difference in price of an ounce of gold between two currencies became the exchange rate for those two currencies. This represented the first standardized means of currency exchange in history.

The gold standard eventually broke down during the beginning of World War I. Due to the political tension with Germany, the major European powers felt a need to complete large

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military projects. The financial burden of these projects was so substantial that there was not enough gold at the time to exchange for all the excess currency that the governments were printing off.

Caution Although the gold standard would make a small comeback during the inter-war years, most countries had dropped it again by the onset of World War II. However, gold never ceased being the ultimate form of monetary value.

Bretton Woods System

Before the end of World War II, the Allied nations believed that there would be a need to set up a monetary system in order to fill the void that was left behind when the gold standard system was abandoned. In July 1944, more than 700 representatives from the Allies convened at Bretton Woods, New Hampshire, to deliberate over what would be called the Bretton Woods system of international monetary management.

To simplify, Bretton Woods led to the formation of the following:

1. A method of fixed exchange rates;
2. The U.S. dollar replacing the gold standard to become a primary reserve currency; and
3. The creation of three international agencies to oversee economic activity: the International Monetary Fund (IMF), International Bank for Reconstruction and Development, and the General Agreement on Tariffs and Trade (GATT).

One of the main features of Bretton Woods is that the U.S. dollar replaced gold as the main standard of convertibility for the world's currencies; and furthermore, the U.S. dollar became the only currency that would be backed by gold. (This turned out to be the primary reason that Bretton Woods eventually failed.)

Over the next 25 or so years, the U.S. had to run a series of balance of payment deficits in order to be the world's reserved currency. By the early 1970s, U.S. gold reserves were so depleted that the U.S. treasury did not have enough gold to cover all the U.S. dollars that foreign central banks had in reserve.

Finally, on August 15, 1971, U.S. President Richard Nixon closed the gold window, and the U.S. announced to the world that it would no longer exchange gold for the U.S. dollars that were held in foreign reserves. This event marked the end of Bretton Woods.

Even though Bretton Woods didn't last, it left an important legacy that still has a significant effect on today's international economic climate. This legacy exists in the form of the three international agencies created in the 1940s: the IMF, the International Bank for Reconstruction and Development (now part of the World Bank) and GATT, the precursor to the World Trade Organization.

Current Exchange System

After the Bretton Woods system broke down, the world finally accepted the use of floating foreign exchange rates during the Jamaica agreement of 1976. This meant that the use of the gold standard would be permanently abolished. However, this is not to say that governments adopted a pure free-floating exchange rate system. Most governments employ one of the following three exchange rate systems that are still used today:

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1. ***Dollarization:*** This event occurs when a country decides not to issue its own currency and adopts a foreign currency as its national currency. Although dollarization usually enables a country to be seen as a more stable place for investment, the drawback is that the country's central bank can no longer print money or make any sort of monetary policy. An example of dollarization is El Salvador's use of the U.S. dollar.

2. ***Pegged Rates:*** Pegging occurs when one country directly fixes its exchange rate to a foreign currency so that the country will have somewhat more stability than a normal float. More specifically, pegging allows a country's currency to be exchanged at a fixed rate with a single or a specific basket of foreign currencies. The currency will only fluctuate when the pegged currencies change.

   For example, China pegged its yuan to the U.S. dollar at a rate of 8.28 yuan to US$1, between 1997 and July 21, 2005. The downside to pegging would be that a currency's value is at the mercy of the pegged currency's economic situation. For example, if the U.S. dollar appreciates substantially against all other currencies, the yuan would also appreciate, which may not be what the Chinese central bank wants.

3. ***Managed Floating Rates:*** This type of system is created when a currency's exchange rate is allowed to freely change in value subject to the market forces of supply and demand. However, the government or central bank may intervene to stabilize extreme fluctuations in exchange rates.

Example: For example, if a country's currency is depreciating far beyond an acceptable level, the government can raise short-term interest rates. Raising rates should cause the currency to appreciate slightly; but understand that this is a very simplified example. Central banks typically employ a number of tools to manage currency.

14.3.2 Market Participants

Unlike the equity market – where investors often only trade with institutional investors (such as mutual funds) or other individual investors – there are additional participants that trade on the forex market for entirely different reasons than those on the equity market. Therefore, it is important to identify and understand the functions and motivations of the main players of the forex market.

Governments and Central Banks

Arguably, some of the most influential participants involved with currency exchange are the central banks and federal governments. In most countries, the central bank is an extension of the government and conducts its policy in tandem with the government. However, some governments feel that a more independent central bank would be more effective in balancing the goals of curbing inflation and keeping interest rates low, which tends to increase economic growth. Regardless of the degree of independence that a central bank possesses, government representatives typically have regular consultations with central bank representatives to discuss monetary policy. Thus, central banks and governments are usually on the same page when it comes to monetary policy.

Central banks are often involved in manipulating reserve volumes in order to meet certain economic goals. For example, ever since pegging its currency (the yuan) to the U.S. dollar, China has been buying up millions of dollars worth of U.S. treasury bills in order to keep the yuan at its target exchange rate. Central banks use the foreign exchange market to adjust their reserve volumes. With extremely deep pockets, they yield significant influence on the currency markets.

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Banks and Other Financial Institutions

In addition to central banks and governments, some of the largest participants involved with forex transactions are banks. Most individuals who need foreign currency for small-scale transactions deal with neighbourhood banks. However, individual transactions pale in comparison to the volumes that are traded in the interbank market.

The interbank market is the market through which large banks transact with each other and determine the currency price that individual traders see on their trading platforms. These banks transact with each other on electronic brokering systems that are based upon credit. Only banks that have credit relationships with each other can engage in transactions. The larger the bank, the more credit relationships it has and the better the pricing it can access for its customers. The smaller the bank, the less credit relationships it has and the lower the priority it has on the pricing scale.

Banks, in general, act as dealers in the sense that they are willing to buy/sell a currency at the bid/ask price. One way that banks make money on the forex market is by exchanging currency at a premium to the price they paid to obtain it. Since the forex market is a decentralized market, it is common to see different banks with slightly different exchange rates for the same currency.

Hedgers

Some of the biggest clients of these banks are businesses that deal with international transactions. Whether a business is selling to an international client or buying from an international supplier, it will need to deal with the volatility of fluctuating currencies.

If there is one thing that management (and shareholders) detests, it is uncertainty. Having to deal with foreign-exchange risk is a big problem for many multinationals. For example, suppose that a German company orders some equipment from a Japanese manufacturer to be paid in yen one year from now. Since the exchange rate can fluctuate wildly over an entire year, the German company has no way of knowing whether it will end up paying more euros at the time of delivery.

One choice that a business can make to reduce the uncertainty of foreign-exchange risk is to go into the spot market and make an immediate transaction for the foreign currency that they need.

Unfortunately, businesses may not have enough cash on hand to make spot transactions or may not want to hold massive amounts of foreign currency for long periods of time. Therefore, businesses quite frequently employ hedging strategies in order to lock in a specific exchange rate for the future or to remove all sources of exchange-rate risk for that transaction.

For example, if a European company wants to import steel from the U.S., it would have to pay in U.S. dollars. If the price of the euro falls against the dollar before payment is made, the European company will realize a financial loss. As such, it could enter into a contract that locked in the current exchange rate to eliminate the risk of dealing in U.S. dollars. These contracts could be either forwards or futures contracts.

Speculators

Another class of market participants involved with foreign exchange-related transactions is speculators. Rather than hedging against movement in exchange rates or exchanging currency to fund international transactions, speculators attempt to make money by taking advantage of fluctuating exchange-rate levels.

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Did u know? The most famous of all currency speculators is probably George Soros. The billionaire hedge fund manager is most famous for speculating on the decline of the British pound, a move that earned $1.1 billion in less than a month. On the other hand, Nick Leeson, a derivatives trader with England's Barings Bank, took speculative positions on futures contracts in yen that resulted in losses amounting to more than $1.4 billion, which led to the collapse of the company.

Some of the largest and most controversial speculators on the forex market are hedge funds, which are essentially unregulated funds that employ unconventional investment strategies in order to reap large returns. Think of them as mutual funds on steroids. Hedge funds are the favourite whipping boys of many a central banker. Given that they can place such massive bets, they can have a major effect on a country's currency and economy. Some critics blamed hedge funds for the Asian currency crisis of the late 1990s, but others have pointed out that the real problem was the ineptness of Asian central bankers.

Self Assessment

Fill in the blanks:

10. ……..... occurs when one country directly fixes its exchange rate to a foreign currency so that the country will have somewhat more stability than a normal float.

11. ……..... occurs when a country decides not to issue its own currency and adopts a foreign currency as its national currency.

14.4 Economic Theories and Data

There is a great deal of academic theory revolving around currencies. While often not applicable directly to day-to-day trading, it is helpful to understand the overarching ideas behind the academic research.

The main economic theories found in the foreign exchange deal with parity conditions. A parity condition is an economic explanation of the price at which two currencies should be exchanged, based on factors such as inflation and interest rates. The economic theories suggest that when the parity condition does not hold, an arbitrage opportunity exists for market participants. However, arbitrage opportunities, as in many other markets, are quickly discovered and eliminated before even giving the individual investor an opportunity to capitalize on them. Other theories are based on economic factors such as trade, capital flows and the way a country runs its operations. We review each of them briefly below.

14.4.1 Major Theories

Purchasing Power Parity

Purchasing Power Parity (PPP) is the economic theory that price levels between two countries should be equivalent to one another after exchange-rate adjustment. The basis of this theory is the law of one price, where the cost of an identical good should be the same around the world. Based on the theory, if there is a large difference in price between two countries for the same product after exchange rate adjustment, an arbitrage opportunity is created, because the product can be obtained from the country that sells it for the lowest price.

The relative version of PPP is as follows:

$$e = \frac{\Pi_1 - \Pi_2}{1 + \Pi_2}$$

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Where 'e' represents the rate of change in the exchange rate and '$\prod_1$' and '$\prod_2$' represent the rates of inflation for country 1 and country 2, respectively.

Example: If the inflation rate for country XYZ is 10% and the inflation for country ABC is 5%, then ABC's currency should appreciate 4.76% against that of XYZ.

$$\text{Expected Currency Application} = \frac{XYZ - ABC}{1 + ABC} = \frac{0.10 - 0.05}{1 + 0.05} = \frac{0.05}{1.05} = 4.76\%$$

Interest Rate Parity

The concept of Interest Rate Parity (IRP) is similar to PPP, in that it suggests that for there to be no arbitrage opportunities, two assets in two different countries should have similar interest rates, as long as the risk for each is the same. The basis for this parity is also the law of one price, in that the purchase of one investment asset in one country should yield the same return as the exact same asset in another country; otherwise exchange rates would have to adjust to make up for the difference.

The formula for determining IRP can be found by:

$$(i_1 - i_2) = \left(\frac{F - S}{S}\right)(1 - i_2)$$

Where 'F' represents the forward exchange rate; 'S' represents the spot exchange rate; 'i_1' represents the interest rate in country 1; and 'i_2' represents the interest rate in country 2.

International Fisher Effect

The International Fisher Effect (I FE) theory suggests that the exchange rate between two countries should change by an amount similar to the difference between their nominal interest rates. If the nominal rate in one country is lower than another, the currency of the country with the lower nominal rate should appreciate against the higher rate country by the same amount.

The formula for IFE is as follows:

$$e = \frac{i_1 - i_2}{1 + i_2}$$

Where 'e' represents the rate of change in the exchange rate and 'i_1' and 'i_2'represent the rates of inflation for country 1 and country 2, respectively.

Balance of Payments Theory

A country's balance of payments is comprised of two segments – the current account and the capital account – which measure the inflows and outflows of goods and capital for a country. The balance of payments theory looks at the current account, which is the account dealing with trade of tangible goods, to get an idea of exchange-rate directions.

If a country is running a large current account surplus or deficit, it is a sign that a country's exchange rate is out of equilibrium. To bring the current account back into equilibrium, the exchange rate will need to adjust over time. If a country is running a large deficit (more imports than exports), the domestic currency will depreciate. On the other hand, a surplus would lead to currency appreciation.

The balance of payments identity is found by:

$$BCA + BKA + BRA = 0$$

Where BCA represents the current account balance; BKA represents the capital account balance; and BRA represents the reserves account balance.

Real Interest Rate Differentiation Model

The Real Interest Rate Differential Model simply suggests that countries with higher real interest rates will see their currencies appreciate against countries with lower interest rates. The reason for this is that investors around the world will move their money to countries with higher real rates to earn higher returns, which bids up the price of the higher real rate currency.

Asset Market Model

The Asset Market Model looks at the inflow of money into a country by foreign investors for the purpose of purchasing assets such as stocks, bonds and other financial instruments. If a country is seeing large inflows by foreign investors, the price of its currency is expected to increase, as the domestic currency needs to be purchased by these foreign investors. This theory considers the capital account of the balance of trade compared to the current account in the prior theory. This model has gained more acceptance as the capital accounts of countries are starting to greatly outpace the current account as international money flow increases.

Monetary Model

The Monetary Model focuses on a country's monetary policy to help determine the exchange rate. A country's monetary policy deals with the money supply of that country, which is determined by both the interest rate set by central banks and the amount of money printed by the treasury. Countries that adopt a monetary policy that rapidly grows its monetary supply will see inflationary pressure due to the increased amount of money in circulation. This leads to a devaluation of the currency.

These economic theories, which are based on assumptions and perfect situations, help to illustrate the basic fundamentals of currencies and how they are impacted by economic factors. However, the fact that there are so many conflicting theories indicates the difficulty in any one of them being 100% accurate in predicting currency fluctuations. Their importance will likely vary by the different market environment, but it is still important to know the fundamental basis behind each of the theories.

14.4.2 Economic Data

Economic theories may move currencies in the long term, but on a shorter-term, day-to-day or week-to-week basis, economic data has a more significant impact.

It is often said the biggest companies in the world are actually countries and that their currency is essentially shares in that country. Economic data, such as the latest gross domestic product (GDP) numbers, are often considered to be like a company's latest earnings data. In the same way that financial news and current events can affect a company's stock price, news and information about a country can have a major impact on the direction of that country's currency. Changes in interest rates, inflation, unemployment, consumer confidence, GDP, political stability etc. can all lead to extremely large gains/losses depending on the nature of the announcement and the current state of the country.

The number of economic announcements made each day from around the world can be intimidating, but as one spends more time learning about the forex market it becomes clear which announcements have the greatest influence. Listed below are a number of economic indicators that are generally considered to have the greatest influence – regardless of which country the announcement comes from.

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Employment Data

Most countries release data about the number of people that currently are employed within that economy. In the U.S., this data is known as non-farm payrolls and is released the first Friday of the month by the Bureau of Labour Statistics. In most cases, strong increases in employment signal that a country enjoys a prosperous economy, while decreases are a sign of potential contraction. If a country has gone recently through economic troubles, strong employment data could send the currency higher because it is a sign of economic health and recovery. On the other hand, high employment can also lead to inflation, so this data could send the currency downward. In other words, economic data and the movement of currency will often depend on the circumstances that exist when the data is released.

Interest Rates

As was seen with some of the economic theories, interest rates are a major focus in the forex market. The most focus by market participants, in terms of interest rates, is placed on the country's central bank changes of its bank rate, which is used to adjust monetary supply and institute the country's monetary policy. In the U.S., the Federal Open Market Committee (FOMC) determines the bank rate, or the rate at which commercial banks can borrow and lend to the U.S. Treasury.

Notes The FOMC meets eight times a year to make decisions on whether to raise, lower or leave the bank rate the same; and each meeting, along with the minutes, is a point of focus.

Inflation

Inflation data measures the increases and decreases of price levels over a period of time. Due to the sheer amount of goods and services within an economy, a basket of goods and services is used to measure changes in prices. Price increases are a sign of inflation, which suggests that the country will see its currency depreciate. In the U.S., inflation data is shown in the Consumer Price Index, which is released on a monthly basis by the Bureau of Labour Statistics.

Gross Domestic Product

The gross domestic product of a country is a measure of all of the finished goods and services that a country generated during a given period. The GDP calculation is split into four categories: private consumption, government spending, business spending and total net exports. GDP is considered the best overall measure of the health of a country's economy, with GDP increases signalling economic growth. The healthier a country's economy is, the more attractive it is to foreign investors, which in turn can often lead to increases in the value of its currency, as money moves into the country. In the U.S., this data is released by the Bureau of Economic Analysis once a month in the third or fourth quarter of the month.

Retail Sales

Retail sales data measures the amount of sales that retailers make during the period, reflecting consumer spending. The measure itself doesn't look at all stores, but, similar to GDP, uses a group of stores of varying types to get an idea of consumer spending. This measure also gives market participants an idea of the strength of the economy, where increased spending signals a strong economy. In the U.S., the Department of Commerce releases data on retail sales around the middle of the month.

Durable Goods

The data for durable goods (those with a lifespan of more than three years) measures the amount of manufactured goods that are ordered, shipped and unfilled for the time period. These goods

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include such things as cars and appliances, giving economists an idea of the amount of individual spending on these longer-term goods, along with an idea of the health of the factory sector. This measure again gives market participants insight into the health of the economy, with data being released around the 26th of the month by the Department of Commerce.

Trade and Capital Flows

Interactions between countries create huge monetary flows that can have a substantial impact on the value of currencies. As was mentioned before, a country that imports far more than it exports could see its currency decline due to its need to sell its own currency to purchase the currency of the exporting nation. Furthermore, increased investments in a country can lead to substantial increases in the value of its currency.

Trade flow data looks at the difference between a country's imports and exports, with a trade deficit occurring when imports are greater than exports. In the U.S., the Commerce Department releases balance of trade data on a monthly basis, which shows the amount of goods and services that the U.S. exported and imported during the past month. Capital flow data looks at the difference in the amount of currency being brought in through investment and/or exports to currency being sold for foreign investments and/or imports. A country that is seeing a lot of foreign investment, where outsiders are purchasing domestic assets such as stocks or real estate, will generally have a capital flow surplus.

Did u know? Balance of payments data is the combined total of a country's trade and capital flow over a period of time. The balance of payments is split into three categories: the current account, the capital account and the financial account. The current account looks at the flow of goods and services between countries. The capital account looks at the exchange of money between countries for the purpose of purchasing capital assets. The financial account looks at the monetary flow between countries for investment purposes.

Macroeconomic and Geopolitical Events

The biggest changes in the forex often come from macroeconomic and geopolitical events such as wars, elections, monetary policy changes and financial crises. These events have the ability to change or reshape the country, including its fundamentals. For example, wars can put a huge economic strain on a country and greatly increase the volatility in a region, which could impact the value of its currency. It is important to keep up to date on these macroeconomic and geopolitical events.

There is so much data that is released in the forex market that it can be very difficult for the average individual to know which data to follow. Despite this, it is important to know what news releases will affect the currencies you trade.

Self Assessment

Fill in the Blanks:

12. …….. is the economic theory that price levels between two countries should be equivalent to one another after exchange-rate adjustment.
13. Fisher Effect theory suggests that the exchange rate between two countries should change by an amount similar to the difference between their …….. interest rates.
14. …….. data measures the increases and decreases of price levels over a period of time.
15. The …….. of a country is a measure of all of the finished goods and services that a country generated during a given period.

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Task Speak to various investors of forex market and prepare an assignment on the working of forex market.

Case Study

Random Entry & Risk Reward in Forex Trading by Nial Fuller

Over the last two weeks I have conducted a trading experiment in order to prove a point to anyone out there who might be in doubt of the power of risk reward combined with price action trading strategies. This article will take you on a journey into my mind and will hopefully prove to you that if you simply implement proper risk reward and have a willingness to learn a high probability trading strategy like price action, you have all the ingredients to become a consistently profitable forex trader. This article will open your eyes, I suggest you read it, start to learn about the concepts discussed.

The Experiment

In order to first demonstrate and prove the power of risk reward, I decided to randomly enter 20 trades over the last 2 weeks in the EURUSD, GBPUSD, and AUDUSD on a demo account. No price action setups were used, nor was there any method or strategy of any kind implemented when entering the market. The parameters were simply to enter one of the above three currency pairs a total of 20 times within 10 trading days using a stop loss of 50 pips and a target of 100 pips for each trade, making a risk reward of 1 to 2 on every setup. I did not "mess" with any trade once it was entered, I employed pure set and forget forex trading in this experiment; I simply entered and then let the market do its thing, in order to prove the power of risk reward. (Note, the 20th trade was at breakeven at the time of this writing and I did not have time to wait for it to close out, I counted it as a winner, I will update this article if it ends up becoming a loser when it closes, although this will not change any of the implications or insights of this article.)

While this experiment was meant to prove the power of risk reward, it was also meant to prove the power of price action trading strategies combined with risk reward. My results showed a small profit after entering randomly 20 times with a risk reward of 1 to 2 on every trade, this after having lost 12 out of 20 trades. This means my winning percentage for this series of trades was 40%, so I lost on 60% of the trades and won on only 40% as you can see by the trade history below , this random entry model combined with a 1 to 2 risk reward still profited about $200, this with no edge applied at all.

Contd...

Notes

Order	Time	Type	Size	Symbol	Price	S / L	T / P	Time	Price	Swap	Profit
9816...	2011.01.04 18:04	balance								Deposit	5 000.00
9816...	2011.01.04 18:06	sell	0.10	gbpusd	1.55810	1.56310	1.54810	2011.01.05 16:53	1.54810	-0.26	100.00
9818...	2011.01.05 06:13	sell	0.10	eurusd	1.32817	1.33317	1.31817	2011.01.05 15:19	1.31817	0.00	100.00
9822...	2011.01.05 18:12	buy	0.10	audusd	0.99775	0.99275	1.00775	2011.01.07 00:39	0.99275	4.25	-50.00
9824...	2011.01.06 07:17	buy	0.10	eurusd	1.31448	1.30948	1.32448	2011.01.06 12:36	1.30948	0.00	-50.00
9828...	2011.01.06 19:33	buy	0.10	eurusd	1.30182	1.29682	1.31182	2011.01.07 01:56	1.29682	0.00	-50.00
9830...	2011.01.07 08:06	sell	0.10	eurusd	1.29873	1.30373	1.28873	2011.01.10 00:00	1.28873	-0.19	100.00
9831...	2011.01.07 15:32	buy	0.10	audusd	0.99476	0.98976	1.00476	2011.01.10 16:52	0.98976	1.06	-50.00
9834...	2011.01.10 06:09	sell	0.10	eurusd	1.29022	1.29522	1.28022	2011.01.10 17:50	1.29522	0.00	-50.00
9839...	2011.01.10 17:26	sell	0.10	gbpusd	1.55031	1.55531	1.54031	2011.01.10 17:42	1.55531	0.00	-50.00
9839...	2011.01.10 18:00	sell	0.10	audusd	0.99099	0.99599	0.98099	2011.01.10 20:14	0.99599	0.00	-50.00
9840...	2011.01.10 20:16	sell	0.10	gbpusd	1.55788	1.56288	1.54788	2011.01.11 18:37	1.56288	-0.26	-50.00
9842...	2011.01.11 08:42	buy	0.10	eurusd	1.29551	1.29051	1.30551	2011.01.11 17:01	1.29051	0.00	-50.00
9846...	2011.01.11 17:04	sell	0.10	gbpusd	1.55544	1.56044	1.54544	2011.01.11 18:23	1.56044	0.00	-50.00
9847...	2011.01.11 18:33	buy	0.10	audusd	0.98848	0.98348	0.99848	2011.01.12 00:19	0.98348	1.05	-50.00
9847...	2011.01.11 19:41	sell	0.10	eurusd	1.29643	1.30143	1.28643	2011.01.12 03:57	1.30143	-0.19	-50.00
9849...	2011.01.12 00:59	buy	0.10	gbpusd	1.56057	1.55557	1.57057	2011.01.12 18:08	1.57057	0.00	100.00
9850...	2011.01.12 04:08	buy	0.10	audusd	0.98565	0.98065	0.99565	2011.01.12 20:29	0.99565	0.00	100.00
9854...	2011.01.12 16:42	buy	0.10	eurusd	1.30336	1.29836	1.31336	2011.01.12 20:48	1.31336	0.00	100.00
9857...	2011.01.13 01:01	buy	0.10	gbpusd	1.57540	1.57040	1.58540	2011.01.13 16:28	1.58540	0.00	100.00
Profit/Loss: 105.46 Credit: 0.00 Deposit: 5 000.00 Withdrawal: 0.00											5 105.46

What is the lesson to learn here?

While the trade history above certainly proves the true power of risk reward, we have to ask ourselves how much better we could do by applying a true edge in the market, like the edge we get from trading price action setups. When combined with experience and education, price action trading strategies can certainly provide you with trade setups that give you a better than 50% probability in the market, assuming you apply discretion and do not over-trade. So, if we assume we can attain at least a 50% win rate by using simple price action strategies like the ones that I teach, and we use a risk reward of at least 1 to 2 on every trade, over a series of 20 trades where we risk $50 per trade, we would make a profit of $500 ($1000 in winnings – $500 in losses).

So, we know that risk reward strategies work, there is no doubt about that at all; you randomly enter the market and if you make at least 2 times your risk on your winning trades, you will likely breakeven or turn a small profit over a series of trades. When we combine this knowledge of the power of risk to reward with a high-probability edge like price action, what we have is a professional money management and trading strategy, which when combined with the proper education and discretion will make money over a series of at least 20 trades or more.

Professional traders know that their winners have to out-pace their losers to make money, because most professional traders only win about 50% of the time. If you have no edge in the market that can get you to the point of winning at least around 50% of your trades, you are probably going to only breakeven over any series of trades, assuming you still implement a risk reward of at least 1 to 2. Most traders do not implement risk reward properly; they take profits of less than 2 times risk which inherently forces them to have a very high overall winning percentage to make money. By taking a profit of less than 2 times risk, you are basically PURPOSESLY putting the odds against you, because you then will have to win over 50% of your trades to make money, and most trading strategies do not give you an edge that will allow you to consistently win over 50% of your trades.

A high quality price action setup allows you to set and forget your trading while still giving you a higher than 50% chance of winning any given setup. What this means is that with price action and risk reward you have a nearly stress-free way to trade the market; you can wait patiently for obvious price action setups that develop from confluent areas and/or in trending markets, enter a risk reward of 1 to 2, and walk away until the trade is

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closed. If you actually do this with discipline, by only taking obvious price action setups and rigidly implementing a risk reward of at last 1 to 2, you will become profitable over a series of trades.

The key is to not get discouraged if you hit a few losers or become over-confident if you hit a few winners. What if you lose on the first 8 trades out of 20? Look at the results of my trading experiment above; did you notice that I lost on 9 trades in a row before hitting a series of winners? This is called trading, and sometimes you will hit a string of losers or a string of winners, but you can't let this influence your forex trading plan, you have to have a longer-term outlook and remind yourself that your edge, combined with risk reward, needs time to play out.

Obtaining the proper training is the key.

Other than being able to control your emotions and remaining disciplined enough on a consistent basis to not over-leverage or over-trade and implement proper risk reward on every trade, the biggest variable that can influence your trading success is whether or not you know what your edge is and when you should trade it. This is where proper forex trading education on a high-probability trading strategy like price action comes in. I have been successfully using simple yet effective price action setups to trade the markets now for years, and I teach other traders exactly how I trade in my forex trading course. My course and it's teachings not only give you a trading strategy, but it shows you when to use the strategy and what the market should look like before you enter.

When you combine my price action setups with a thorough knowledge of risk reward implementation and a mastery of trading plain vanilla price charts, you will begin to think like a professional trader. Pro traders see the market in a completely different way than amateurs do; they do not over complicate anything. First they check the market to see if their trading edge is present; if it is not present then they leave the computer or not look at the charts for a period of time, typically at least 4 hours. If their trading edge is present, they will then move on to the next factor to check; whether or not a risk reward of at least 1 to 2 is logically attainable. If a risk reward of 1 to 2 is attainable then they enter the trade and walk away, that's it. The reason a professional trader thinks and trades like this is because they don't get attached to any one trade; they know that each trade is just one out of a series of many that they must take in order to see their edge play out. Amateur traders get caught up on each trade; they react to the emotion of each loser or winner because they simply cannot see the forest for the trees, typically due to a lack of experience and insight.

Questions

1. About what lesson is the Author talking about in the case?
2. Why proper training is important?

Source: http://www.learntotradethemarket.com/forex-articles/forex-trading-random-entry-and-risk-reward

14.5 Summary

- The forex market represents the electronic over-the-counter markets where currencies are traded worldwide 24 hours a day, five and a half days a week. The typical means of trading forex are on the spot, futures and forwards markets.
- Currencies are "priced" in currency pairs and are quoted either directly or indirectly.
- Currencies typically have two prices: bid (the amount that the market will buy the quote currency for in relation to the base currency); and ask (the amount the market will sell one

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unit of the base currency for in relation to the quote currency). The bid price is always smaller than the ask price.

- Unlike conventional equity and debt markets, forex investors have access to large amounts of leverage, which allows substantial positions to be taken without making a large initial investment.
- The adoption and elimination of several global currency systems over time led to the formation of the present currency exchange system, in which most countries use some measure of floating exchange rates.
- Governments, central banks, banks and other financial institutions, hedgers, and speculators are the main players in the forex market.
- The main economic theories found in the foreign exchange deal with parity conditions such as those involving interest rates and inflation.
- Overall, a country's qualitative and quantitative factors are seen as large influences on its currency in the forex market.

14.6 Keywords

Ask Price: It refers to the amount of quoted currency that has to be paid in order to buy one unit of the base currency.

Direct Quote: It is simply a currency pair in which the domestic currency is the base currency.

Forwards Market: In this market contracts are bought and sold OTC between two parties, who determine the terms of the agreement between themselves.

Indirect Quote: It is a currency pair where the domestic currency is the quoted currency.

Pegging: It occurs when one country directly fixes its exchange rate to a foreign currency so that the country will have somewhat more stability than a normal float.

Pip: It is the smallest amount a price can move in any currency quote.

Spot Market: This is where currencies are bought and sold according to the current price.

Spread: The difference between the bid price and the ask price is called a spread.

14.7 Review Questions

1. Define currency pair.
2. Distinguish between Forex and Equities.
3. Elaborate the benefits and risks associated with the forex market.
4. Explain the theory of Purchasing Power Parity with relevant example.
5. How are Forwards markets different from Futures markets?
6. What are the main players of the forex market?
7. What do you mean by interest rates?
8. What do you mean by Spreads and Pips? Explain giving suitable examples.
9. What is the effect of Inflation on interest rates?

Stock Market Operations

DCOM507

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Answers: Self Assessment

1. foreign exchange market
2. spot
3. futures
4. Base
5. Indirect
6. Cross
7. Ask
8. Spread
9. Pip
10. Pegging
11. Dollarization
12. Purchasing Power Parity (PPP)
13. Nominal
14. Inflation
15. gross domestic product

14.8 Further Readings

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