

SRINIVAS UNIVERSITY



III semester

MBA

Study material

**SECURITY ANALYSIS AND PORTFOLIO
MANAGEMENT**

2019-2021

Syllabus

19MBAEF34/19MCOMEF34 - Security Analysis and Portfolio Management

Course Objectives:	To familiarize the students with various investment and capital market dynamics and its functioning so as to orient them towards investment advisory skills.
Pedagogy and work load:	4 hours per week consisting of Lectures, assignments, practical exercises, discussions, seminars.
Examination:	2 hours; 50 marks

Course content:

Chapter-1 Investment & securities

Investment - process – investment , Gambling & speculation - Real assets and financial assets - short term & long term - call money , treasury bills , CDs, CPs, LCs, discounting of bills , equities, bonds, debentures, fixed deposits, mutual fund units, tax sheltered saving schemes , life insurance and pension products, securitized and non securitized investments, warrants and convertibles and non-convertibles , financial derivatives, Foreign equities

Chapter-2 Securities market

Primary & secondary markets -Structure and functioning of the market, stock exchanges- listing, trading and settlement procedures– OTCEI, NSE, BSE, MCX-SX, - important international stock exchanges- depositories recent developments -stock market indices - BSE SENSEX, BSE -100, BSE-200, Nifty, Dollex and, an overview of other indices - calculation of index.

Chapter-3 Security analysis

Fundamental analysis – economic forecasting & investment decision -economic forecasting methods - industry analysis -classification schemes -key characteristics -industry life cycle -company analysis -financial and nonfinancial factors-

Technical analysis : concept -types of charts -Dow theory -price pattern -support and resistance levels - relative strength analysis -moving averages -breadth of the market -volume -momentum -confidence index - contrary opinion theory -oscillators – stochastic -Elliot wave theory.

Efficient market theory – Forms of market efficiency, Weak form efficiency - random walk hypothesis, semi strong and strong form efficiencies

Chapter-4 Risk and Return

systematic & unsystematic risk - calculation of beta - using beta to estimate return - expected risk & return - Significance of beta in the portfolio theory – estimation of beta from historical share prices, market risk. Capital asset pricing model - assumptions -capital market line -security market line-

Chapter-5 Portfolio Selection & Portfolio Analysis

Rate of return -indifference curves- calculating expected returns & standard deviations of portfolios - Markowitz model, Sharpe's single index model-diversification, Constructing optimal portfolios using Markowitz's model and Sharpe's models.

Chapter-6 Portfolio Revision and Evaluation

Mutual Fund – Concept, history and types, Advantages and disadvantages, Net Asset Value, Indian Mutual Fund Scenario, Performance measurement using Sharpe, Treynor, Jensen, Fama and M2 measures, information Ratio performance measures, GT Performance Measures.

References:

1. Punithavathy Pandian-Security Analysis and Portfolio Management-Vikas Publishing House Pvt Ltd., New Delhi.
2. S Kevin-Security Analysis and Portfolio Management - Prentice Hall of India, New Delhi.
3. Dr. V A Avadhani- Investment and Securities Market in India- Himalaya Publishing House, New Delhi.
4. Donald E Fischer & Ronald J Jordan -Security Analysis and Portfolio Management-Prentice Hall of India, New Delhi.
5. Gordon J Alexander, William F Sharpe and Jeffery V Bailey- Fundamentals of Investments-Prentice Hall of India, New Delhi.
6. Prasanna Chandra-Investment Analysis and Portfolio Management- Tata Mc Graw Hill, New Delhi.
4. William Sharpe- Portfolio Theory and Capital Markets -McGraw-Hill Ryerson, Limited.
7. V K Bhalla,-Investment Management: Security Analysis and Portfolio Management-S Chand & Company Ltd. New Delhi.
8. Robert Jarrow & Stuart Turnbull- Derivative Securities - South-Western College Publishing.
9. Rajiv Srivastava-Derivatives and Risk Management-Oxford University Press, New Delhi.

MARKS STRUCTURE	
Internal Marks	50
Written Examination by University	50
STRUCTURE OF INTERNAL MARKS	
I Internal Test	15
II Internal Test	15
III Assignments & presentation	10
IV Attendance & General Behavior	10
Total Marks	50

Unit 1: Investment & securities

Nature and Scope of Investment Decisions -The Investment Environment

1.1 Investment: An Introduction

Individuals like you invest money for various reasons. It could be that:

- a) You or your family may be earning more than what is required for monthly expenses and thus would like to keep the money in a safe place and also allow the savings to earn a return during the period.
- b) You may not have regular surplus but may get occasional one-time surplus earnings such as annual bonus from your employer or sale of some family property. You would like to keep such money for some time, when you don't required, in some safe place and also allow such savings to earn a return during the period.

We also invest money on education of our children like our parents did. Just like individuals, organizations too make investments. For example, you might have read news items like Reliance Industries investing Rs. 1000 Cr. for expansion of its petrochemical division.

The above examples underline the following characteristics of an 'investment' decision: One, it involves the commitment of funds available with you or that you would be getting in the future. Two, the investment leads to acquisition of a plot, house, or shares and debentures. Three, the physical or financial assets you have acquired is expected to give certain benefits in the future periods. The benefits may be in the form of regular revenue over a period of time like interest or dividend or sales or appreciation after some point of time as normally happens in the case of investments in land or precious metals.

The investment decisions being studied in this unit as well as the course relate to financial assets bulk of which comprise pieces of paper evidencing a claim of the holder (i.e., investor) over the issuer (i.e., user of funds). For example, when you buy shares of, say, Infosys or A.C.C., the share certificate that is handed over to you – in the dematerialized form today unlike the paper certificates issued earlier – testifies your ownership of the number of shares stated in the certificate. It represents your financial claim (as a holder of the said shares) over Infosys or A.C.C., (as issuers of the shares). The same can be said of units of UTI or any other mutual fund schemes or any security like a debenture, a warrant a convertible, etc., of a company. Unlike promoters of companies, several buyers of these securities hold them for limited period and then sell them. The reasons for selling the financial assets could vary from person to person. If an investor needs money for other expenditure like marriage or education, she or he could sell some of the financial assets like shares/ bonds. Similarly, if an investor finds that his expected return for the financial asset is realized, she

or he can sell the same and use the money to buy some other securities. It is also possible that some of these high-risk takers speculate in financial securities. Investors of different kinds look out for investments, which can be sold in organized markets with ease and at best obtainable prices. Financial assets, which are tradable with ease and at best prices in organized markets, are known as 'marketable securities'.

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It may be appropriate at this juncture to define the term 'investment' in a general sense. Investment takes place when an investor postpones her/his consumption, which is initially converted into savings and subsequently into investments. By not spending the entire amount of your salary, you are saving a part of your salary income for the future needs. Savings of this kind run into risk of loss of value because of inflation. In order to prevent erosion of value of your savings, the amount saved has to be invested at least by depositing the amount in savings bank account. You have several options if the money you are saving is not required in the near future and the number of options increases further, if you are willing to assume a bit of risk in your investment. Remember without taking risk, it is not possible to expect a higher return. Some of the investment options available to you are time deposit (fixed deposit) of bank, bonds and debenture of financial institutions or companies, mutual funds, futures, options, etc.

It is interesting to observe that all investment decisions arise from a 'trade-off between current and future consumption. An example would make this idea clear. We can assume an individual who has Rs. 50,000, which he can either spend on current consumption or invest, say, for one year at 11 per cent interest. This person's current consumption (C_o) can range from Rs. Zero (when he invests the whole of Rs. 50,000) to Rs. 50,000 (when he does not invest a single rupee). Similarly, his future consumption (C_i) can be as high as Rs. 55,500 (when he invests the whole of Rs. 50,000 at 11 per cent per annum and ends up with a total wealth of Rs. 50,000 + Rs. 5,500 = Rs. 55,500 at the end of the year (Rs. 5,500 being interest earnings on Rs. 50,000 at 11 per cent) to as low as Rs. Zero (when he consumes the whole of Rs. 50,000 right now).

In most such cases, individuals would consume a part and invest the rest. Such a situation is called a 'trade-off between current and future possibilities. For our hypothetical individual on the trade-off function MN, our investor is on point 'X' which suggests that he spends Rs. 30,000 today and invests the balance Rs. 20,000 to get a total sum of Rs. 22,200, which includes interest of Rs. 2,200, at 11 per cent after one year. (Ref: Figure 1.1).

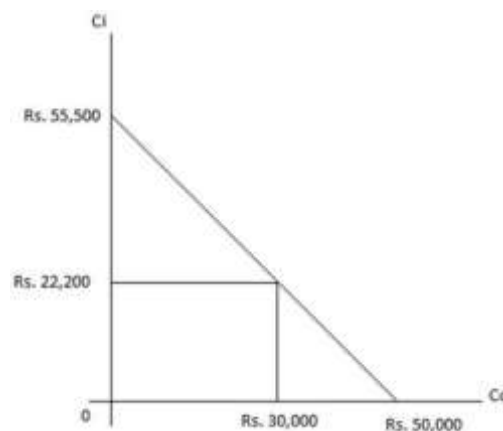


Figure 1.1: Trade-off between present and future consumption

Having defined ‘investment’ in terms of ‘postponed consumption’ we must get ready to answer an inescapable question viz., why should a person postpone his/her present consumption? This question acquires added significance because we know that individual generally prefer current consumption to future consumption. And if they are required to invest or postpone current consumption there must be commensurate inducement. This underlines the need for a positive rate of return on all potential investment without which a person would prefer to consume all his income today rather than tomorrow. Such an investment /consumption behaviour is founded on an important concept known as ‘time preference for money’. This concept signifies ‘a rupee today is worth more than tomorrow’. The ‘tomorrow’ must promise a larger wealth to give incentive to forego current consumption. The next natural question is how much the return should be larger to attract investment?

You will readily notice that a nominal rate of return may well be fully swallowed away by the inflation. For example, if you earn an interest rate (nominal) of 11 per cent for one year on your investment and face the threat of an 11 per cent price rise (inflation) too during that year, where do you stand in terms of purchasing power of your money? What happens in a situation like this is that the 11 per cent nominal return is neutralized by 11 per cent inflation and you remain after one year where you were a year ago. It is, therefore, natural that an investor would be induced to postpone consumption today only if his command over goods and services does not get diluted over time. Thus, if he gets 11 per cent nominal interest and 11 per cent is the rate of inflation, his real rate of return would be zero. In the event of inflation what induce investors to postpone current consumption are the real rate of return and not just the monetary rate of return. There is yet another dimension to the rate of return as an incentive to invest. For example, if a person buys, say, government securities she/he is completely assured of all payments viz., interest and principal. In such cases, a relatively lower rate of return is adequate as an incentive. But if the avenue of investment is a company debenture, the probability of default does exist even if the rate of interest and the repayment

schedules are known in advance. The investor here perceives some risk and would insist upon an additional compensation. In other words, the investor requires a risk premium over and above the risk free rate.

This extra reward or risk premium would have to be substantially greater in the case of shares of companies where the dividend rates are not ascertainable in advance and where payment of such dividends and invested sums are not at all assured. What we are trying to underline through these examples is the 'risk' factor which affects the expected rates of return by investors. In all these cases, investors demand a risk premium. It would thus be seen that the investor's required rate of return would be an aggregate of the risk-free real rate, expected rate of inflation, and risk premium.

Investments in securities on average offer adequate return to compensate the risk assumed by the investors. But one has to wait for a longer period to realize such extra return for the additional risk assumed particularly in case of investments in stocks. In other words, if the holding period of an investment is short, then high-risk securities may not offer adequate return to compensate the risk, you have assumed. You might have recognized the existence of 'speculators' in the securities markets. They invest in high risk securities for a short period and hence are exposed to high level of risk.

Speculators may lose their entire wealth or become rich in a short period of time. How are they different from that of normal investors? We can distinguish the two operators as follows: I. The time-horizon of a speculator is short while that of the investor is long.

- II. The investor expects a 'good' return and a consistent performance over time but the speculator expects abnormal returns earned quickly over short periods.
- III. The investor generally sticks to his investment, but the speculator makes rapid shifts to greener pastures. He moves from one stock to other for a small profit.
- IV. The investor is risk-averse but the speculator takes greater risks. Often, speculators take risk by entering into margin trading (i.e. use borrowed funds) to increase the volume and his exposure in the market.

If speculation is high-risk game, why do exchanges allow such trading? They essentially provide liquidity for the securities and often match the demand and supply of the market. For example, positive news on a firm may attract a large demand for the stock. In the absence of any sellers, the price will shoot up. Some speculators may take a different view and willing to sell the stock to meet the excess demand of the market. Similarly, a mutual fund may want to sell 1 lakhs shares of a company. If there are limited buyers for the stock, the stock price would crash. Again, speculators would buy the stock in anticipation of selling the same at a small profit once the demand for the stock picks up in the market.

1.2 Meaning of Investment

Investment is an activity that is engaged in by people who have savings, i.e. investments are made from savings, or in other words, people invest their savings. But all savers are not investors. Investment is an activity which is different from saving. Let us see what is meant by investment.

It may mean many things to many persons. If one person has advanced some money to another, he may consider his loan as an investment. He expects to get back the money along with interest at a future date. Another person may have purchased one kilogram of gold for the purpose of price appreciation and may consider it as an investment. Yet another person may purchase an insurance plan for the various benefits it promises in future. That is his investment.

In all these cases it can be seen that investment involves employment of funds with the aim of achieving additional income or growth in values. The essential quality of an investment is that it involves waiting for a reward. Investment involves the commitment of resources which have been saved in the hope that some benefits will accrue in future.

Thus, investment may be defined as "a commitment of funds made in the expectation of some positive rate of return"¹. Expectation of return is an essential element of investment. Since the return is expected to be realised in future, there is a possibility that the return actually realised is lower than the return expected to be realised. This possibility of variation in the actual return is known as investment risk. Thus, every investment involves return and risk.

1.2.1 Financial and Economic Meaning of Investment

In the financial sense, investment is the commitment of a person's funds to derive future income in the form of interest, dividend, premiums, pension benefits or appreciation in the value of their capital. Purchasing of shares, debentures, post office savings certificates, insurance policies are all investments in the financial sense. Such investments generate financial assets.

In the economic sense, investment means the net additions to the economy's capital stock which consists of goods and services that are used in the production of other goods and services. Investment in this sense implies the formation of new and productive capital in the form of new constructions, plant and machinery, inventories, etc. Such investments generate physical assets. The two types of investments are, however, related and dependent. The money invested in financial investments are ultimately converted into physical assets. Thus, all investments result in the acquisition of some assets either financial or physical.

1.3 Characteristics of Investment

All investments are characterised by certain features. Let us analyse these characteristic features of investments.

1.3.1 Return

All investments are characterised by the expectation of a return. In fact, investments are made with the primary objective of deriving a return. The return may be received in the form of yield plus capital appreciation. The difference between the sale price and the purchase price is capital appreciation. The dividend or interest received from the investment is the yield. Different types of investments promise different rates of return. The return from an investment depends upon the nature of the investment, the maturity period and a host of other factors.

1.3.2 Risk

Risk is inherent in any investment. This risk may relate to loss of capital, delay in repayment of capital, non-payment of interest, or variability of returns. While some investments like government securities and bank deposits are almost riskless, others are more risky. The risk of an investment depends on the following factors.

1. The longer the maturity period, the larger is the risk.
2. The lower the credit worthiness of the borrower, the higher is the risk.
3. The risk varies with the nature of investment. Investments in ownership securities like equity shares carry higher risk compared to investments in debt instruments like debentures and bonds.

Risk and return of an investment are related. Normally, the higher the risk, the higher is the return.

1.3.3 Safety

The safety of an investment implies the certainty of return of capital without loss of money or time. Safety is another feature which an investor desires for his investments. Every investor expects to get back his capital on maturity without loss and without delay.

1.3.4 Liquidity

An investment which is easily saleable or marketable without loss of money and without loss of time is said to possess liquidity. Some investments like company deposits, bank deposits, P.O. Deposits, NSC, NSS, etc. are not marketable. Some investment instruments like preference shares and debentures are marketable, but there are no buyers in many cases and hence their liquidity is negligible. Equity shares of companies listed on stock exchanges are easily marketable through the stock exchanges.

An investor generally prefers liquidity for his investments, safety of his funds, a good return with minimum risk or minimisation of risk and maximisation of return.

1.4 Objectives of Investment

An investor has various alternative avenues of investment for his savings to flow to. Savings kept as cash are barren and do not earn anything. Hence, savings are invested in assets depending on their risk and return characteristics. The objective of the investor is to minimise the risk involved in investment and maximise the return from the investment.

Our savings kept as cash are not only barren because they do not earn anything, but also loses its value to the extent of rise in prices. Thus, rise in prices or inflation erodes the value of money. Savings are invested to provide a hedge or protection against inflation. If the investment cannot earn, as much as the rise in prices, the real rate of return would be negative. Thus, if inflation is at an average annual rate of ten per cent, then the return from an investment should be above ten per cent to induce savings to flow into investment.

Thus, the objectives of an investor can be stated as:

1. Maximisation of return
2. Minimisation of risk
3. Hedge against inflation.

Investors, in general, desire to earn as large returns as possible with the minimum of risk. Risk here may be understood as the probability that actual returns realised from an investment may be different from the expected return. If we consider the financial assets available for investment, we can classify them into different risk categories. Government securities would constitute the low risk category as they are practically risk free. Debentures and preference shares of companies may be classified as medium risk assets. Equity shares of companies would form the high risk category of financial assets. An investor would be prepared to assume higher risk only if he expects to get

proportionately higher returns. There is a trade-off between risk and return. The expected return of an investment is directly proportional to its risk. Thus, in the financial market, there are different financial assets with varying risk-return combinations.

The investors in the financial market have different attitudes towards risk and varying levels of risk bearing capacity. Some investors are risk averse, while some may have an affinity to risk. The risk bearing capacity of an investor, on the other hand, is a function of his income. A person with higher income is assumed to have a higher risk bearing capacity. Each investor tries to maximise his welfare by choosing the optimum combination of risk and expected return in accordance with his preference and capacity.

1.5 Investment Vs Speculation

Investment and speculation are two terms which are closely related. Both involve purchase of assets like shares and securities. Traditionally, investment is distinguished from speculation with respect to three factors, viz. (1) risk, (2) capital gain and (3) time period.

1.5.1 Risk

It refers to the possibility of incurring a loss in a financial transaction. It arises from the possibility of variation in returns from an investment. Risk is invariably related to return. Higher return is associated with higher risk.

No investment is completely risk free. An investor generally commits his funds to low risk investment, whereas a speculator commits his funds to higher risk investments. A speculator is prepared to take higher risks in order to achieve higher returns.

1.5.2 Capital Gain

The speculator's motive is to achieve profits through price changes, i.e. he is interested in capital gains rather than the income from the investment. If purchase of securities is preceded by proper investigation and analysis to receive a stable return and capital appreciation over a period of time, it is investment. Thus, speculation is associated with buying low and selling high with the hope of making large capital gains. A speculator consequently engages in frequent buying and selling transactions.

1.5.3 Time Period

Investment is long-term in nature, whereas speculation is short-term. An investor commits his funds for a longer period and waits for his return. But a speculator is interested in short-term trade gains through buying and selling of investment instruments.

Analysis of these distinctions helps us to identify the role of an investor and a speculator. An investor is interested in a good rate of return earned on a rather consistent basis for a relatively longer period

of time. He evaluates the worth of a security before investing in it. A speculator seeks opportunities promising very large returns earned rather quickly.

He is interested in market action and price movements. Consequently, speculation is more risky than investment.

Basically, both investment and speculation aim at good returns. The difference is in motives and methods. As a result, the distinction between investment and speculation is not very wide. Investment is sometimes described as 'a well-grounded and carefully planned speculation'.

1.6 Investment Vs Gambling

Investment has also to be distinguished from gambling. Typical examples of gambling are horse races, card games, lotteries, etc. Gambling consists in taking high risks not only for high returns, but also for thrill and excitement. Gambling is unplanned and nonscientific, without knowledge of the nature of the risk involved. It is surrounded by uncertainty and is based on tips and rumors. In gambling artificial and unnecessary risks are created for increasing the returns.

Investment is an attempt to carefully plan, evaluate and allocate funds to various investment outlets which offer safety of principal and moderate and continuous return over a long period of time. Gambling is quite the opposite of investment.

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1.7 Nature of Investment Decisions

You have understood from the discussion above that an individual invests 'postpones consumption' only in response to a rate of return, which must be suitably adjusted for inflation and risk. This 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 declines - larger the increase in inflation, the greater the depletion in the buying power of cash. 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 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 to, of course, the level of risk they 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.

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 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 to uncertainty. 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 investments 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 risks and different associated expectations of return. The basic investment decision would be a trade-off between risk and return.

Figure 1.2 depicts the risk-return trade-off available to rational investors. The line R_f -M shows the risk-return function i.e., a trade-off between expected return and risk that exists for all

investors interested in financial assets. You may notice that the R_f -M line always slopes upward because it is plotted against expected return, which has to increase as risk rises. No rational investor would assume additional risk unless there is extra compensation for it. This is how his expectations are built. This is, however, not the same thing as the actual return always rising in response to increasing risk. The risk-return trade-off is figured on 'expected or anticipated (i.e., ex-ante) return' and not on actual or realized (ex-post) return'. Actual return will also be higher for high-risk securities, if you plot long-term return of these investments. It is relatively easier to show evidence for this in debt instruments. For example, Treasury Bills offers lowest return among the government securities because of their short-term nature. Government bonds with a long-term maturity offer a return higher than treasury bills because they are exposed to interest rate risk. We will discuss more when we cover bond analysis. Corporate bonds offer a return more than government bonds because of default risk. The return ranges from 12% to 18% depending on the credit rating of the bond. The returns of all these securities are less volatile compared to equity return. The long-term return of BSE Sensitive Index is around 18%.

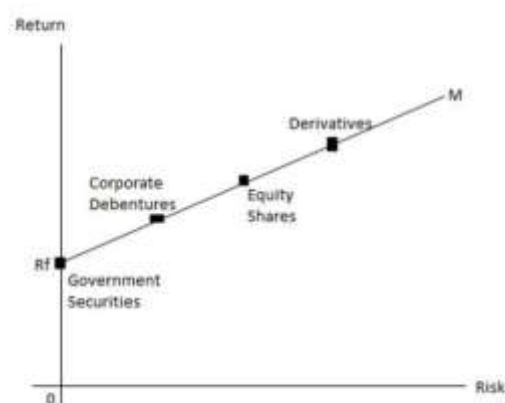


Figure 1.2: The Expected Risk-Return Trade-off function

You may now look at Figure 1.2 to understand the relative positioning of different financial assets on the risk-return map. The point R_f is the expected return on government securities where risk is zero and is recognized as the risk-free rate. As you move on the R_f -M line, you find successive points, which show the increase in expected return as risk increase. Thus, equity shares, which carry lot more of risk than government securities and company debentures, are plotted higher on the line. Company debentures are less risky than equity because of the mortgages and assurances made available to the investor but more risky than government securities where the default risk is zero because government generally does not fail. They are placed between the two securities viz., government securities and equity shares. Warrants, options and financial futures are other specialized financial assets ranked in order of rising risk. We shall know more about these investments in a latter unit. An important point deserves attention while interpreting the risk-return trade-off of the type presented in Figure 1.2. It shows a simple fact. Financial securities are of different types and they offer different risk-return combination. The risk and return also move together. Thus, if an investor is not willing to assume any risk, she/he will have to be satisfied with the risk-free rate i.e., R_f by investing the wealth in government securities. There are several options to investors. They can buy some small savings (like NSC, PPF, Indira-Vikas Patra, etc.) or invest the amount in a mutual funds scheme, which specializes in government securities. If you are not happy with 8% or 9% return of government securities, you can move to next security that offers higher return. But there is a cost associated with such higher return. Investors in corporate bonds have to bear additional risk compared to investors of government securities. One of the important sources of additional risk is default risk since companies may fail to honor the interest and principal liability. As you move on the ladder, you can expect a higher return but your risk also increases. Investors need to strike a balance when they allocate their wealth under various investments. If someone invests their entire savings only in government securities or only in high-risk securities like equity or derivatives, it may not yield desired result. Investors need to balance the investments by partly investing in equities and partly in government securities. The proportion of investment can be changed depending on the economic outlook. Allocation of wealth on different securities and periodical revision should be an integral part of your investment strategy.

1.8 The Investment Decision Process

In the last two sections, we emphasized two important issues namely the need for converting savings into investments and a balanced approach in selection of securities. Investment process gives you a methodology of achieving the above two objectives. A lot of planning is required while investing your hard-earned money in securities. Often investors lose money when they make investments without any planning. They make hasty investment decision when the market and economy was at its peak based on some recommendation. Some of you might have invested during secondary market boom of 1992 and primary market boom of 1994-95. Many investors of those times are yet to recover their losses. In the year 1999-2000, investors of several software stocks, both in primary and secondary market, have lost heavily. In all these cases, the problem is lack of planning and to an

extend greed. Both are not good for making a decent return on investment. A typical investment decision undergoes a five-step procedure, which in turn forms the basis of the investment process. These steps are:

- a. Determine the investment objectives and policy
- b. Undertake security analysis
- c. Construct a portfolio
- d. Review the portfolio
- e. 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. The investment process is a key-process entailing the whole body of security analysis and portfolio management. Let us, now, discuss the steps involved in the investment process in detail:

- a. **Investment objectives and Policy:** The investor will have to work out his investment 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. The objective should be in clear and specific terms. It can be expressed in terms of expected return or expected risk. Suppose, an investor can aim to earn 12% return against the risk-free rate of 9%. It means the investor is willing to assume some amount of risk while making investment. Alternatively, the investor can set her or his preference on risk by stating that the risk of investment should be below market risk. In specific terms, she or he can say that beta of the portfolio has to be 0.80. If the investor defines one of the two parameters of investment (return or risk), it is possible to find the other one because a definite relationship exists between the two in the market. It may not be possible for you to define both return and risk because it may not be achievable. For example, if you want to earn a return of 12% with zero risk when government securities offer a return of 9%, it would not be possible to develop an investment for you. Thus, it is desirable to set one of the two parameters (risk or return) and find the other one from the market. If necessary, an investor can revise the objective if she/he finds the risk is too high for her/him to bear a desired return. Though setting an investment objective is good, many investors fail to do the same and blindly invest their money without bothering the risk associated with such investments. Investments are bound to fail if an investor ignores this point.

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 this 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. Some investors may entirely avoid derivatives because of high risk associated with such investments. Some investors may invest more in equities to earn higher return but use derivatives to reduce additional risk. As in consumer products, financial products also come with different colors and flavors and one has to be highly knowledgeable before selecting appropriate securities.

- b. **Security Analysis:** After defining the investment objective and broadly setting the proportion of wealth to be invested under different categories, the next step is selecting individual securities under each category. For instance, if an investor sets 50% of her/his wealth to be invested in government securities, the next question is which of the government securities that the investments should be made. It should be noted that not all government securities are one and the same. A long-term government bond is much riskier than short-term bonds. Similarly, investment in equities requires identification of companies stocks, in which the investment can be made. Security analysis is often performed in two or three stages. The first stage, called economic analysis, would be useful to set broad investment objective. If the economy is expected to do well, investor can invest more in stocks. On the other hand, if the economic slowdown is expected to continue, investor can invest less in stocks and more in bonds. In stage two, investors typically examine the industries and identify the industries, in which investment can be made. There are several classifications of industry, which we will discuss in a separate unit. Investments need not be made in any one specific industry because many of the stocks may be overpriced in a growth industry. It is better to look for three to five industries and it depends on individual's choice. The issue is an analysis of broad trends of industry and future outlook is essential to proceed further on security analysis.

As the last step, one has to look into the fundamentals of specific companies and find whether the stock is desirable for investment. At this stage, investors need to match the risk-return objective she/he has set in the previous stage. Company specific analysis includes examination of historical financial information as well as future outlook. Using historical performance and future outlook, specifically the future cash flows are projected and discounted to present value. Through such analysis, analysts quantify the intrinsic value of the stock and compare the same with current market price. If the intrinsic value is greater than the current market price, the stock qualifies for investment. For instance, if an investor based on her/his understanding and estimation of cash flows finds the intrinsic value of Hindustan Lever is Rs. 300 against its market price of Rs. 250, then the stock qualifies for investment. Similar analysis has to be done for other stocks too. Since a large number of stocks are traded in the market, it may be difficult to perform such analysis for all stocks. Normally, investors use certain conditions to reduce the number of stocks for such analysis.

However, before investing in the stock, the investor would like to examine whether the stock fits into the risk-return profile that was outlined earlier.

- c. **Portfolio Construction:** In the previous stage, bonds and stocks, which fulfill certain conditions, are identified for investments. Under portfolio construction stage, the investor has to allocate the wealth to different stocks. A couple of principles guide such allocation of wealth. Investors need to appreciate that the risk of portfolio comes down if the portfolio is diversified. Diversification here doesn't mean more than one stock but stocks whose future performance is not highly correlated. Further, too much diversification or too many stocks may also create problem in terms of monitoring. For example, if the investor decides to invest 10% of the wealth in software sector, it would be desirable to restrict the investment in two or three stocks based on the amount of investment. On the other hand, if she/he invests in 20 software stocks, the portfolio will become too large and create practical problem of monitoring. While including stocks in the portfolio, the investor has to watch its impact on the overall portfolio return and risk and also examine whether it is consistent with the initial investment objective. Portfolio construction is not done once for all. Since investors saving take place over a period of time, portfolios are also constructed over a period of time. It is a continuous exercise. Sometime, timing of investment may be critical. For instance, if an investor saves Rs. 30,000 during the first quarter and the desired portfolio includes both bonds and stocks, the issue before the investor is whether the amount has to be used for bonds or stocks or both. It requires some further analysis at that point of time. However, over the years, when the accumulated investments grow to certain level, subsequent yearly investments as a proportion of total investments will become smaller and hence the timing issue will become minor decision.
- d. **Portfolio Revision:** Under portfolio construction, investor is matching the risk-return characteristics of securities with the risk-return of investment objective. Under two conditions, the securities, in which investment was made earlier, require liquidation and investing the amount in a new security. The risk or expected return of the security might have changed over a period of time when the business environment changes. For instance, the software sector, which was showing 100% growth between 1995-2000 has suddenly become risky after the U.S. slowdown. Many frontline companies have revised their estimated earnings growth from 100% to 40%. The stock might also become less risky but offer lower return. That is, when the risk-return characteristics of securities change, it will affect the desired risk-return characteristics of portfolio and hence calls for a revision of portfolio of stocks. Another reason for selling some of the securities in the portfolio and buying a new one in its place is a change in investment objective. For instance, when you are young and have less family commitments, then your investment objective may aim for higher return even if it amounts to higher risk. You may invest more of your savings in

equity stocks and derivatives. When your family grows, you might want to reduce the risk and change the investment objective. Portfolio of securities has to be revised to reflect your new investment objective. There is yet another reason for revision, which we discussed earlier. When the macro-economic condition changes, you may want to shift part of your investment from equity to debt or vice versa depending on the future economic outlook.

- e. **Portfolio Performance Evaluation:** The value of your investment changes over a period of time and it reflects the current market value of the securities in the portfolio. For instance, if you have made some investment in Hindustan Lever some 10 years back, when you first started investing, the value of HLL today is several times more than its value some 10 years back. Few stocks could have resulted in a loss and it would be difficult to construct a portfolio of stocks only with winner stocks. Portfolio return reflects the net impact of positive and negative returns of individual securities in the portfolio. At the end of each period, you may like to compute the portfolio return and risk and compare the same with your investment objective as well as certain benchmark risk- return. The objective of this exercise is to evaluate the efficiency in construction and management of portfolio.

1.9 The Investment Environment

A reading of the first three sections would have provided some understanding on the basic principles of investment. Suppose you are able to frame your investment objective and also identified securities that are to be purchased. Now you need to deal with the market for the purchase and sale of securities. An understanding of the operational details of the market would be useful. Investment decisions to buy/sell securities taken by individuals and institutions are carried through a set of rules and regulations. There are markets - money and capital - that function subject to such rules and established procedures and are, in turn, regulated by legally constituted authority. Then there are securities or financial instruments which are the objects of purchase and sale. Finally, the mechanism, which expedites transfers from one owner to another, comprises a host of intermediaries. All these elements comprise the investment environment. Investors have to be fully aware of this environment for making optimal investment decisions.

Discussion in the following paragraphs provides a brief overview of the three elements of the investment environment viz., instruments, institutions, and markets:

1.9.1 Financial Instruments

Financial assets or instruments can be classified in a variety of ways. We will classify them into creditorship and ownership securities on the basis of the nature of the buyer's commitment. The description will then be split into public and private issues differentiating the two major forms of issuance.

1.9.1.1 Creditorship Securities

Debt instruments furnish an evidence of indebtedness of the issuer to the buyer. Periodic payments on such instruments are generally mandatory and all of them provide for the eventual repayment at maturity of the principal amount. Securities may also be sold at a price below the eventual redemption price, the difference between the redemption price and the sale price constituting the interest. For example, a buyer of a Rs. 100 bond/debenture may receive an interest at 6 per cent for one year in one of the following ways:

- a. he pays Rs. 100 at the time of investment and receives Rs. 106 at the end of one year, or
- b. he pays Rs. 94.30 at the beginning and receives Rs. 100 at maturity i.e., he receives 6 per cent of Rs. 94.30 that is equal to the difference between Rs. 100 (redemption price) and Rs. 94.30 (issue price).

The interest amount in rupees measured as a percent of the par value of a debt instrument is known as nominal or coupon 'rate of interest. For example, Rs. 28 payable per year on a debenture whose face/par value is Rs. 200 yields a coupon rate of 14 per cent per annum.

Debt instruments can be issued by public bodies and governments and also by private business firms.

Public Debt Instruments: Government issues debt instruments for long and short periods. They are rated the best in terms of quality and are risk-free. A common term used to designate them is 'gilt-edged-securities'. The 182-day treasury bills issued by the Government of India are examples of short-term instruments. Government also borrows money for long-term and 11.5 percent Loan 2009 (V issue) of the Government of India is an example of long-term instruments. State governments and local bodies also issue series of loans and bonds. Banks, insurance, pension and provident funds, and several other organizations buy government debt instruments in compliance with their statutory obligations. Such debt instruments are usually over-subscribed. You can refer money market page of any one of the financial dailies, where you can find the list of short-term and long-term securities that were bought and sold on a particular day.

Private Debt Instruments: These are issued by private business firms, which are incorporated as companies under the Companies Act, 1956. Generally these instruments are secured by a mortgage on the fixed assets of a company. In addition to plain debt instruments, there are several variations. A very popular variety of such debentures are 'convertible' whereby either the whole or a part of the par value of a debenture is convertible (either automatically or at the option of investors) on the expiry of a stipulated period after issue. The terms of conversion are stated in advance. There may be a series of conversions and conversion price may differ from period to period. Select Indian companies are now raising short-term funds by issuing a debt instrument known as Commercial paper (CP). The Reserve Bank of India has issued detailed guidelines in January 1990 in this regard. They are contained in "Non-Banking Companies (Acceptance of Deposits through the Commercial

Paper) Directives, 1989". The eligibility for entering into the CP market is based on transparent norm, which companies themselves, can readily assess. These conditions were relaxed in April 1990.

Special Debt Instruments: With a view to mop up resources and innovating the spectrum of debt instruments, two new debt instruments deserve a special mention viz., Public Sector Undertaking (PSU) Bonds (long-term) and Certificate of Deposit (short-term).

The PSU bonds are issued to the general public and financial institutions by public sector undertakings, usually with tax incentive. It is interesting to note that a large proportion of PSU bonds are privately placed with banks, their subsidiaries, and financial institutions.

Certificates of Deposits (CDs) were introduced in June 1989. Commercial banks are permitted to issue CDs within a ceiling equal to 2 per cent of their fortnightly average outstanding aggregate deposits. The maturity of 3 months at the short-end and one-year at the longer end was generally popular with investors. Interest rates for CDs are normally higher than the interest rate offered by the bank for similar maturity period deposits.

1.9.1.2 Ownership Securities

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

Indirect Equities: The investor acquires special instruments of institutions, who take the buy- sell decisions on behalf of investors. Such institutions are Mutual Funds. An individual who buys Unit of mutual fund gets a dividend from the income of the Mutual Fund after meeting all expenses of management. The Units can be bought from and sold to the institution at sale and repurchase prices announced from time to time (on a daily basis). Many mutual funds schemes are also listed in stock exchanges and investors can also sell and purchase the Units through secondary markets. The objective of Mutual Funds is to use their professional expertise in portfolio construction and pass on the benefits to the small investor who cannot repeat such a performance if left alone to subscribe to equity shares directly.

Direct Equities: The investor can subscribe directly to the equity issues placed on the market by the new companies or by the existing companies. If she/he is already a shareholder of an existing company, which enters the capital market for additional issue of equity shares, such an investor would get a pro rata right to subscribe, on a pre-emptive basis, to the new issue. Such offerings are known as 'rights shares'. Established companies' reward their shareholders in the form of 'bonus shares' as well. They are given out of the accumulated reserves and shareholders need not pay any cash consideration as happens in the case of 'right shares'. For example, a company may announce a bonus issue on a one-for-one basis. This amounts to a 100 per cent bonus issue (or, loosely stock dividend) so that the number of shares held by a shareholder after the bonus would be doubled. The chances for an increase in the potential dividend income become very bright and this would happen

unless the company imposes a proportionate cut in future dividends. Thus, a shareholder, who held 100 shares of Rs. 10 each in a company, got a dividend income of Rs. 200, the dividend announced being 20 per cent. His shareholding after a 100 per cent bonus now increases to 200. Now, if the company maintaining the same rate of dividend as last year viz., 20 per cent, the dividend income of the shareholder would go up to Rs. 400. He will, of course, get only Rs. 200 even after the bonus if the company prunes the dividend to 10 per cent.

A less popular instrument is called 'preference share'. It is neither full debt nor full equity and is, therefore, recognized as a 'hybrid security'. Such a shareholder would have certain preference over equity shareholder. They may relate to dividends, redemption, participation, and conversion, etc. The most common is with regard to dividends which, when not paid for any particular year, get accumulated and no equity dividend would be payable in future until such accumulated areas of preference dividend are cleared. The dividend rate on these shares is normally less than the one on equity shares but greater than interest rate.

1.9.2 Financial Intermediaries

Financial intermediaries perform the intermediation function i.e., they bring the users of funds and the suppliers of funds together. Many of them issue financial claims against themselves and use cash proceeds to purchase the financial assets of others. The Unit Trust of India and other mutual funds belong to this category.

Most financial institutions underwrite issues of capital by non-governmental public limited companies in addition to directly subscribing to such capital either under a public issue or under a private placement. In 1992, SEBI required all equity issues were to be underwritten fully but this requirement was withdrawn subsequently. The percentage of underwriting has come down substantially after the withdrawal of this requirement. While good issues require no underwriting, underwriters are not willing to underwrite bad issues.

The financial institutions engaged in intermediary activities include the Industrial Development Bank of India, Industrial Finance Corporation of India, Industrial Credit and Investment Corporation of India, Unit Trust of India, Life Insurance Corporation, and General Insurance Corporation. Two institutions, which have broadened financial services activities in India, deserve a special mention. They are: The Credit Rating Information Services of India Ltd., (CRISIL) and other credit rating agencies, and the Stockholding Corporation of India Ltd. (SHCIL).

CRISIL, the first credit rating agency of the country, was set up jointly by ICICI, UTI, LIC, GIC, and Asian Development Bank. It started operations in January 1988 and has rated a large number of debt instruments and public deposits of companies. CRISIL ratings provide a guide to investors as to the risk of timely payment of interest and principal on a particular debt instruments and preference

shares on receipt of request from a company. Ratings relate to a specific instrument and not to the company as a whole. They are based on factors like industry risk, market position and operating efficiency of the company, track record of management, planning and control system, accounting, quality and financial flexibility, profitability and financial position of the company, and its liquidity management.

The SHCIL was sponsored by IDBI, IFCI, ICICI, UTI, LIC, GIC and IRBI to introduce a book entry system for the transfer of shares and other types of scrips replacing the present system that involves voluminous paper work. The corporation commenced its operations in August 1988. Commencing its operations with UTI, SHCIL has now extended its operations to GIC, LIC mutual fund, and New India Assurance Co. Ltd.

1.9.3 Financial Markets

Securities markets can be seen as primary and secondary. The primary market or the new issues market is an informal forum with national and even international boundaries. Anybody who has funds and the inclination to invest in securities would be considered a part of this market. Individuals, trusts, banks, mutual funds, financial institutions, pension funds, and for that matter any entity can participate in such markets. Companies enter this market with initial and subsequent issues of capital. They are required to follow the guideline prescribed by the regulating agencies like SEBI from time to time unless they are expressly exempted from doing so. A prospectus or a statement-in-lieu of prospectus is a necessary requirement because this contains all material information on the basis of which the investor would form judgment to put or not to put his money. Concealment and misrepresentations in these documents have serious legal implications including the annulment of the issue.

Some companies would use the primary market by using their 'in house' skill but most of them would employ brokers, broking and underwriting firms, issue managers, lead managers for planning and monitoring the new issue. New guidelines issued by the Securities & Exchange Board of India (SEBI), now, require the compulsory appointment of a registered merchant banker as issue manager where the amount of the capital issue exceeds Rs.50 lakhs.

Secondary markets or stock exchanges are set up under the Securities Contracts (Regulation) Act, 1956. They are known as recognized exchanges and operate within precincts that possess networks of communication, automatic information scans, and other mechanized systems. Members are admitted against purchase of a membership card whose official prices vary according to the size and seniority of the exchange. Membership cards generally command high unofficial premium because the number of members is not easily expandable. Business was earlier transacted on the trading floor within official working hours under the open bid system. Today, all exchanges in India have introduced screen-based trading where the members of the exchange transact the business

(purchase and sale of securities) through computer terminals. You can visit the nearest NSE broker's office to find yourself how trading takes place. Methods of recording and settlement are laid down in advance and members are obligated to follow them. Arbitration procedures exist for the resolution of disputes. The regulatory mechanism relating to capital market has seen major changes during the last ten years. The Securities and Exchange Board of India (SEBI) is now responsible to monitor and control the stock market operations, new capital issues, working of mutual funds, merchant bankers and other intermediaries. SEBI has issued separate guidelines for each of the above entities and requires all the intermediaries to register with the SEBI and periodically submit the reports on their operations.

1.10 Investment Avenues

The investor has various alternative avenues of investment for his savings to flow in accordance with his preferences. These investment alternatives range from money market securities to capital market securities to derivative securities. Investors today have to choose among thousands of investment alternatives. Hence, it is impossible to make intelligent investment decisions without having some knowledge and understanding about the characteristics and features of various alternatives.

Investment instruments or assets or securities are broadly divided in two categories: financial assets and real assets. Real assets determine the wealth of an economy, whereas financial assets are merely claims to the income generated by real assets. They are represented by paper and can also be termed 'paper assets'. For example, stocks, bonds, bank deposits etc. are no more than sheets of paper or more likely computer entries. Real assets are represented by tangible assets such as land, buildings, machines, precious stones etc. The material wealth of a society is determined by the productive capacity of its economy i.e. the goods and services that is provided. This productive capacity depends largely on the real assets that are used to produce goods and the workers, whose skills, are necessary to use those resources. Hence, the physical and human assets, together, generate the entire spectrum of output produced and consumed by the society. When the real assets used by a firm generate income, the income is allocated to investors according to their ownership of the financial assets or securities, issued by the firm. For example, the bond-holders are entitled to an income based on the rate of interest and par value of the bond whereas the equity holders are entitled to the residual income after the bond holders and other creditors are paid. Value of financial assets depends on the values of the real assets of the firm. When an individual chooses to invest his current wealth for the future, he prefers to hold financial assets. The money a firm receives by issuing securities is used to purchase real assets. The returns on a financial asset come from the income produced by the real assets that are financed by the issuance of the security. Hence, financial assets can be viewed as the means by which individuals hold their claims on real assets. For example, it is not possible for everyone to own an automobile plant (a real asset), but one can hold shares of the plant (a financial asset) that provides income derived from the production of automobiles.

1.10.1 Real Assets Vs. Financial Assets

With the advancement of economy, the relative importance of financial assets tends to increase. Even though the real assets differ greatly from financial assets, two forms of investments are complementary and not competitive. The difference between real assets and financial assets can be summarized as follows:

- Real assets determine the wealth of a society or economy whereas financial assets do not represent society's wealth.
- Real assets contribute directly to the productive capacity of the economy while the contribution of financial assets to the productive capacity is indirect because they facilitate the transfer of funds to enterprises with attractive investment opportunities.
- Real assets produce goods and services whereas financial assets define the allocation of income or wealth among investors.
- Real assets appear only on the asset side of the balance sheet, while financial assets appear on both sides of the balance sheet.
- Financial assets are created and destroyed in the ordinary course of doing business. For example, when a loan is repaid, both the creditor's claim and the debtor's obligation stop to exist. However, real assets are destroyed only by accident or by wearing out over time.
- Investing in real assets carries more risks than investing in paper assets.

1.10.2 Financial Assets

Financial assets can be divided into - direct investment and indirect investment. A direct investment gives the investor actual ownership of the securities. The investors can buy and sell the securities themselves using a broker. Indirect investment gives ownership of an entity (such as investment companies) that owns actual securities. Instead of investing directly in securities, investors invest in a portfolio of securities by purchasing the shares of a financial intermediary or investment company (e.g. mutual funds) that invests in various types of securities on behalf of its shareowners. Thus indirect investment is the buying and selling of the shares of the investment companies, which, in turn, hold portfolios of securities.

1.10.2.1 Direct Investment

Direct investments can again be divided into Marketable securities and Non-marketable securities.

1.10.2.1.1 Non-Marketable Financial Assets

Some financial assets are said to be non-marketable because they are neither transferable nor negotiable. The investors actually own these assets and cannot buy or sell them in the secondary market. Bank deposits, post office deposits, provident fund etc. are examples of non-marketable financial assets. A distinguishable feature of these assets is that they represent personal transactions between the investor and the issuer. For instance, when you open a provident fund account, you open the account personally or deal personally to maintain the account or close it.

These are 'safe' instruments and are highly liquid. For example, when you close a savings account the money can be retrieved back easily and quickly.

The non-marketable resources held by investors are as follows:

Bank Deposits

The most popular non-marketable assets held by an investor include deposits with banks and their saving schemes. There are various types of deposits with banks such as current accounts, savings accounts and fixed deposits. Deposits on current accounts do not earn any interest whereas bank deposits on other kinds of accounts such as savings and fixed deposits earn interest. The interest rates on these deposits vary depending upon the maturity period. Since savings accounts are deposited at regular interval, they have a fixed rate of interest. However, fixed deposits are recurring deposits with varying maturity period. Hence, the interest rates also vary.

Non-negotiable Certificate of Deposits

Commercial banks and other financial institutions offer a variety of savings certificates known as certificates of deposits (CDs). These instruments are available for various maturities. As the maturity increases, the rate of interest offered also increases. However, large deposits may command higher rates, holding maturity constant. The credit risk associated with large CDs depends directly on the creditworthiness of the financial institutions that issue them. Since large CDs are not insured, a CD holder may lose principal if the financial institution fails.

Money Market Deposits Accounts

Financial institutions offer money market deposit accounts with no interest rate ceilings. These money market deposit accounts require a minimum deposit to open. They pay competitive money market rates of interest and are insured by the Federal Deposit Insurance Corporations (FDIC), if the issuing bank is insured. Withdrawals can be made, as many times as desired, in person or through automated teller machines (ATMs). There are no limitations on the number of deposits.

Instruments of Post Offices

The Investment avenues provided by the post offices generally enjoy tax concessions. Some of the major instruments are explained below.

Post-office savings deposits: These are savings deposited by public up to a maximum of Rs. 50,000, in individual account and Rs. 1 lakh in joint account. The rate of interest is 5.5%, which is tax-free

and is 0.5% more than that offered by savings bank a/c by any other commercial banks. Withdrawal from the account is by cheque and there is no restriction on withdrawals, unlike in commercial banks.

Post-office fixed deposits: These accounts are open to individuals either separately or jointly for varying fixed periods of time. Accordingly, the interest rate also varies i.e. 9.5% for one-year deposits to 11.5% for 5 year deposits and is payable half yearly.

Post-office recurring deposits: This is an instrument of regular monthly savings. The account holder has to save and deposit every month a fixed amount of Rs. 5 or multiples of 5 till the maturity period. It carries a rate of 11% on the balance to the account, compounded quarterly and payable at maturity. This scheme provides free life insurance cover after receiving contributions for 24 months. In the case of death of the account holder after a minimum period of two years, from the date of opening the account, the nominee will get the full maturity value provided there have been no withdrawals during the first two years. However, the benefit of cover is not available for an extended period of deposit beyond five years.

Post-office time deposits: Post-office time deposits can be made in multiples of Rs. 50 without any limit. The rate of interest is generally slightly higher than those on bank deposits and is tax exempt within certain limits under section 80L of the Income Tax Act. The interest is calculated half yearly and paid annually. Withdrawal is permitted after six months. However withdrawals made between six months and one year are not subjected to any interest. Withdrawals after first year but before the term of the deposit are paid interest for the period the deposit has been held.

A post office time deposit account can be pledged.

Post-office monthly income scheme with fixed investment: This scheme provides regular monthly income to the depositor. Under this scheme, an individual can invest from a minimum of Rs. 1,000 to a maximum of Rs. 3,00,000 in single account or Rs. 6,00,000 in a joint account for a period of six years. Interest at 9% is payable monthly and a bonus of 10% is payable at maturity. Income is tax-exempt within certain limits as per Section 80 L of the Income Tax Act. Premature withdrawal is permitted after 1 year. However, withdrawals made before three years are subjected to a penalty of 5% deduction.

Kisan Vikas Patra: Under this scheme, an individual can invest a minimum amount of investment of Rs. 1,000. There is no maximum limit. The investment doubles in 7 years and 8 months. The rate of interest is 9.46% compounded annually and is tax-exempt. Withdrawal is permitted only after 2.5 years. Kisan Vikas Patra can be pledged as a collateral security for raising loans.

National Savings Certificates: National Savings Certificates come in denominations of Rs. 100, Rs.500, Rs. 1,000, Rs. 5,000 and Rs. 10,000. It has a term of 6 years and the rate of interest is 9.2% compounded annually. The interest is tax-exempt. It can be pledged for raising loans.

National Savings Scheme: The National Savings Scheme has been started by the Government of India to mobilize public savings for financing our economic development plans. These schemes are uniform all over the country and are tax-free. However, the amount that is withdrawn during a year is taxable. An individual can deposit in multiples of 100 up to Rs. 40,000 per year and earn a compound interest rate of 9% per annum. The number of deposits that can be made in a year is twelve. The interest is credited to the account at the end of each month and is paid at a time with the principal when the contract terminates. The interest rate is usually higher than that of commercial banks. One premature withdrawal is permitted annually after 3 years. The amount that can be withdrawn is limited to the balance outstanding at the end of the fourth preceding year. These schemes also have nomination facility. In case of death of the depositor, the nominee is not liable to be taxed on withdrawal. The national savings scheme account has no definite maturity period and can be closed if the depositor desires, at the end of 3 years from the end of the year in which last deposit is made. These schemes can also be transferred from one post-office to another post-office if the investor so desires. Further they can be pledged as security towards loan guarantee.

Fixed Deposit Schemes in Companies

Many companies offer fixed deposit investment schemes. The fixed deposits offered by manufacturing companies are regulated by the Company Law Board and the fixed deposits mobilized by non-banking finance companies (NBFCs) are regulated by the Reserve Bank of India. Deposits can be cumulative or non-cumulative. These schemes are offered through newspaper advertisements and are subject to the provisions of the Companies Rules of 1975. These are offered to the public as well as to existing shareholders and employees. The investor can apply for these schemes on the company's prescribed application form. This is a short-term scheme and offers a higher interest rate than the commercial banks. The interest is payable annually, semi-annually, quarterly and monthly. However, under cumulative deposit schemes, the interest is accumulated and paid at the end. Accordingly, the interest is compounded annually, semi-annually, quarterly or monthly. The interest on company deposits is taxable. For manufacturing companies, the term of deposits is one to three years while for NBFCs, the term of deposits may vary between 25 months to 5 years. Unlike bank deposits, company fixed deposits are unsecured i.e. they are not protected by any insurance scheme. If a company goes into liquidation, the depositors, as unsecured creditors, rank after the secured creditors and lenders. Hence, before investing in a company, an investor should go through the information, provided by company while inviting deposits from the public, carefully. It is necessary that fixed deposits of a company may be rated by rating agencies.

In order to attract investors companies offer incentives such as facility for premature withdrawal, free personal accident insurance, scholarship to the wards of investors, loan facility, preferential allotment in the issue of equity shares and convertible debentures. Moreover, companies compensate brokers by giving a commission and reimbursement of expenses. Brokers share this with the investors.

Provident Fund Schemes

There are mainly two types of provident fund schemes - Employees Provident Fund Scheme (EPF) and Public Provident Fund Scheme (PPF).

Employees provident fund scheme: Each salaried employee will have a separate provident fund account in which both the employer and the employee are required to contribute a certain minimum amount on a monthly basis. While the contribution made by the employer is exempt from tax, a tax rebate under Section 88 of the Income Tax Act is available to the employee's contribution. This scheme earns an interest of 8.5% compounded annually, which is credited to the PF account and not paid annually to the employee. The balance in the provident fund account that is paid to the employee at the time of retirement is totally exempt from taxes. Another advantage of this scheme is that loans may be taken against the balance in the PF account without paying any interest. This loan is taken within a certain limit pertaining to the employee's contribution only. There are again three types of employees' provident fund:

- **Statutory PF:** It was set up in 1925 and is maintained by government or semi- government, local authorities, railways, universities and educational institutions.
- **Recognized PF:** The name is given so; because it is recognized by the Commissioner of Income Tax according to the rules contained in Part A, Schedule IV of the Income Tax Act. In this type of PF, the employer's contribution is not fully tax exempt. The contribution is tax exempt up to 10% of the salary of the employee. Excess of employer's contribution over 10% of the salary makes it taxable.
- **Unrecognized Provident Fund:** The employer's contribution is tax-exempt but the tax rebate under Section 80 C is not available to the investor or the employees.

Public provident fund scheme (PPF Scheme): Unlike EPF Scheme, there is no employer to contribute any amount to the public provident fund account. This scheme was introduced on July 1, 1968. Any person from the public, whether salaried or self-employed who does not have the facility to save through Provident Fund Contribution can open a PPF account at any bank that offers this scheme. The salaried employees are allowed to contribute to this scheme in addition to the contributions made to their PF account in their respective companies or establishments. Though it is a 15-year scheme, the number of contributions required is 16. The 15-year period is calculated from the financial year following the date on which the account is opened. Thus, a PPF account matures on the first day of the 17th year. The PPF deposits can be made in monthly installments with a minimum deposit of Rs. 500 per year and a maximum deposit of Rs. 70,000 per year. An adult can open only one a/c in his own name besides opening an a/c on behalf of his wife or his minor child. Deposits in PPF a/c are tax-exempt under Section 80C of the Income Tax Act. The rate of interest is 8% per annum compounded annually which is tax free. However, the interest is not paid monthly.

and is credited to PPF account, which is paid at maturity. The balance in the PPF account is also tax exempt and is not subject to attachment under any order or decree of a court. A PPF a/c holder can make one withdrawal every year after completion of 5 years. However withdrawal is limited to 50% of the balance at the end of the year immediately preceding the year of withdrawal less the amount of loan, if taken. A PPF a/c holder can take loan from the account from the 3rd year to the 6th year after opening the account. However the amount of loan cannot exceed 25% of the balance at the end of the second preceding financial year. The loan is subjected to an interest of 10%. After maturity, if the a/c holder wants, the account can be continued for three successive block periods of five years each, with or without deposits. In such a case, only one withdrawal is permitted provided that the total amount withdrawn during a 5 year block does not exceed 60% of the balance of the account at the beginning. A PPF account is not transferred but has nomination facility.

Life Insurance Policies

Life insurance is a contract between a person and an insurance company for a number of years covering either the life time period or a fixed number of years. The basic customer needs met by the life insurance policies includes protection and savings. Protection benefits means providing financial protection to the policy- holder (or his family members) in case of premature death, longterm sickness or disability. Policies that provide savings benefit allow the policyholder to build up funds to meet specific investment objectives such as income in retirement or repayment of a loan. There are many policies that provide a combination of both savings mid protection benefits. Thus life insurance is a long-term investment with an element of protection and savings.

The most popular insurance company of India is the Life Insurance Company (LIC). Apart from this, there are various other life insurance companies such as Met Life Insurance Company, INC Vysya Life Insurance, Birla Sun Life Insurance, HDFC Standard Life Insurance, ICICI

Prudential Life Insurance, Max New York Life, Kotak Mahindra Life Insurance, SBI Life Insurance Company and Tata AIG Life Insurance Company, etc. The premium paid under a life insurance policy is tax-exempt. Any sum received under a life insurance policy, including the sum allocated in the form of bonus on such policy is exempt from tax.

1.5.2.1.2 Marketable Financial Assets

A security that can be bought and sold in a secondary financial market is called a marketable security. Marketable securities include money market instruments, capital market instruments and derivatives securities.

Money Market Instruments

They are short-term debt securities having a maturity of less than one year from the time of issue. Some of the characteristics of the money market instruments are explained below:

- They have a high degree of liquidity. Most of the instruments have active secondary markets that allow them to be sold prior to maturity.
- They have negligible risk and exhibit a high degree of safety of principal i.e. their risk of default or failure to repay principal is low and in some cases effectively nonexistent.
- Except certificate of deposits (CDs), all money market instruments are discount securities i.e. they sell for less than face values and pay no periodic interest. When such an instrument matures, the investor receives the face value. The difference between the selling price and the face value is the investors' return.
- They have a tendency to trade in large denominations i.e. they are issued in high dollar amounts say, Rs. One million or more.
- Though these instruments mature within one year from the date of issue, most instruments have maturities of three months (90 days) or less.
- These instruments are issued by borrowers with generally high credit standing, such as the government itself, federally sponsored agencies, banks, financial institutions, security dealers, corporates etc. Individual investors, rarely participate in the money market directly.

A brief description of the various money market instruments are given below.

Treasury Bills (T-Bills): They are the best-known, premier money market instruments. They represent the debt obligations of the Government of India and are issued with three standard maturities- 91 days (13 weeks), 182 days (26 weeks) and 364 days (52 weeks). T-bills do not

carry any interest rate. They are sold on an auction basis at a discount from the face value and are redeemed at par (face) value. The difference between the selling price and the face value is the return earned by the investor. Thus greater the discount at the time of purchase, higher is the return earned by the investor. The 13-week and 26 week T-bills are auctioned weekly whereas the 52 week bill is auctioned monthly. They are free of any default risk and are highly liquid. They have a highly active secondary market where they can be traded easily and readily. The terms of T-bill are not specified in paper. Rather the purchase is simply recorded on the computer. Because of the low risk and short maturity, T-bills are considered to be an attractive investment alternative.

Commercial Paper (CP): It can be defined as short-term unsecured promissory notes issued by large, well-known and financially strong corporations. In essence, it is the corporate equivalent of a T-Bill. A company can issue a CP either directly to the investor or through dealers (banks). When the company deals directly with the investors, the CP is called a direct paper. On the other hand, when CPs are issued by dealers on behalf of their corporate customers, they are called dealer papers. The CPs are usually issued at a discount from the face value and redeemed at par. The maturity period of a CP is 90 to 180 days. It is a simple instrument and does not involve documents of any sort. Companies, which are able to raise funds through CPs become better in the financial world and are, thereby, placed in a more favorable position for raising long-term capital. Although, a secondary market exists for CPs, it is weak.

Negotiable Certificate of Deposits (NCDs): Certificates of Deposit are a term savings deposit at a bank or other financial institutions. Certificates are issued against these deposits. Unlike other money market instruments, CDs are interest-bearing securities i.e. they pay interest on their principal amounts at specified annual rates. The maturity period of a CD is 3 months to 1 year. Previously all CDs were federally insured and could not be sold before maturity. Interest rates were kept low and were subject to ceilings set by the Federal Reserves. During 1960s and 1970s, CD rates started to fall well below the money-market rates. In order to increase their direct access to the money market, banks offered a new type of CD. These CDs were not federally insured, their interest rates were not subject to ceilings and they could be sold before maturity in a secondary market. Hence they are also called negotiable CDs. In other words, NCDs are tradable time deposits. They can be sold in the open market before maturity. Unlike treasury bills and CPs, NCDs are engraved certificates i.e., proper documentation exists. These certificates specify the amount of deposit, period till maturity and the method of calculating interest rate. They are issued in both bearer and registered forms. The deposit is maintained in the bank until maturity when the holder receives the deposit plus interest. CDs are usually risk-free and offer a higher rate of interest than treasury bills.

Eurodollar: They are bank deposits denominated in U.S. dollars but issued and held outside the

United States or in U.S. branches of foreign banks. Basically there are two forms of Eurodollar - Eurodollar CDs and Eurodollar deposits. Eurodollar CDs are short term CDs denominated in dollars and issued by banks outside United States. A 180-day Eurodollar CD issued by the

Citibank (Indian Branch) is an example of Eurodollar CD and Eurodollar deposits are dollar denominated time deposits in banks outside the United States. The main difference between Eurodollar CDs and Eurodollar deposits is that Euro CDs are negotiable (i.e. they can be traded) whereas Eurodollar deposits are non-negotiable. Eurodollar CDs constitute the largest component of the Eurodollar market. The Eurodollar market is primarily a wholesale market with large deposits and large loans. Maturity is less than six months. Due to the development of non- U.S. markets for dollar denominated deposits, non-U.S. residents are able to conduct business free of U.S. bank regulations and the interest rate ceilings.

Repurchase Agreement (REPO): Repurchase agreement is a short-term collateralized loan with money market instruments serving as a collateral. It involves purchase and repurchase of given security by two parties at prices determined when the agreement is made. The agreement is made between the borrower and the lender to sell and repurchase the securities. An investor (borrower) sells a package of securities to another investor (lender) and agrees to buy back the securities at a later date at a higher price. Generally the maturity of a repo is 14 days to one month. Sometimes, it is overnight. The difference between the sale price and the repurchase price is the income earned by the lender. Thus, at the end of the period, the seller gets back the security and the purchaser gets back the funds provided together with the interest. For example, Investor A plans to sell a money market instrument, say, a treasury bill to investor B for Rs. 10 million and decides to repurchase the borrower and the lender specifying the time and price of repurchase. Thus, the borrower will have to pay Rs. 100000 to the lender as interest for 30 days' use of Rs. 10 million. The annual interest rate, also known as the repo rate, can be calculated by the following formula:

$$\text{Sell Price} = \text{Repurchase Price} - \left(\text{Repo Rate} \times \left[\frac{\text{TerN}}{360} \right] \times \text{Repurchase Price} \right)$$

$$10,000,000 = 1,01,00,000 - \left(\text{Repo Rate} \times \left[\frac{30}{360} \right] \times 1,01,00,000 \right) = 11.88\% \text{ (approx.)}$$

The repo rate usually depends on the nature of the security traded and the creditworthiness of the seller. A security of long duration could fluctuate simultaneously in value, exposing the purchaser to potential loss if the seller defaults on his obligation to repurchase it and leaves the purchaser stuck, holding a security of depreciated value. Hence, to protect the purchase from such an eventuality, repos that last for several weeks or months have a provision whereby the seller is required to supply additional securities or repay a portion of the funds in case the underlying securities depreciates.

Banker's Acceptances (BA): These are instruments that facilitate commercial trade transactions, A BA is a time draft drawn on a bank by a customer, whereby the bank agrees to pay a particular amount at a specified future date. In exchange, the bank is given the trade documents, temporary title to the goods that are related to the transaction and a commission for its services. The working of a BA can be well understood by the following example:-A

particular company (buyer) wants to buy goods from another company (seller) and wishes to pay for the goods after it sells them, say, 90 days later. However the seller would definitely insist for immediate payment. In such a case, the buyer of the goods issues a letter of credit to the seller guaranteeing the payment within a certain period, say 90 days. This letter, also called the time deposit, is stamped "accepted" by a bank obligating itself to pay the amount on its due date. This letter of credit is, now, known as banker's acceptance or simply BA. The seller having received the BA can either wait till maturity to receive the payment or may sell it at a price that is less than the amount of the promised payment to be made in the future. Thus, BAs are pure discount securities i.e. they sell at a discount. Their maturity ranges from 30 days to 180 days. Usually, BAs are used to finance international trade. Investors in BAs include commercial banks, foreign central banks, money market funds and non-financial corporations. The yield is slightly lower than that on CP as BAs are less risky due to borrower's pledge to pay, collateral of goods and guarantee of the accepting bank.

Money Market Mutual Funds (MMMFs): It is the most recent money market instrument introduced. It invests in short term mutual funds, thus enabling the small investors to participate in the money market by which they can earn market related yield. These funds invest in large pools of short-term instruments. For this, they collect resources from the short-term investors and, again, remit them the total return they receive from these investments less operating costs and a pre-arranged management fee. The MMMFs are of two types -taxable and tax-free- Taxable MMMFs include taxable assets such as CPs, NCDs and T-bills while tax-free MMMFs hold short-term municipal debts. MMMFs can be set-up by commercial banks and public financial institutions. Only individuals can subscribe to MMMFs.

Short-term Municipal Debt: Sometimes, state and local government have temporary needs for cash in anticipation of, say, the receipt of tax and other revenues or prior to sale of bonds. In order to meet this need, they issue short-term municipal securities. These securities are issued in two forms, viz, interest bearing securities and discount securities. Interest bearing securities carry a variable interest payment that is tied to some that is tied to some other open market rate, such as Treasury yields. The extent of the rate movement depends on how the rate to which they are linked behaves over time. On the other hand, in case of discount securities, the interest earnings are exempt from income taxes. Moreover these earnings are exempt from state and local taxes, provided that the investor is a resident of the state or city that issues the debt instrument. Interest bearing securities are more common than discount securities. Depending upon the type of backing available, these municipal securities are of two types - General obligation securities and Revenue securities- In case of general obligation securities, the debt has the backing by full faith and credit of the issuer. They are explicitly supported by the taxing power of the government. However, in case of revenue securities, the issues are backed by the revenues generated by the specific projects funded by the securities and do not carry the backing of the issuer. Hence revenue securities are perceived to be more risky.

Capital Market Instruments

Capital market instruments are long-term sources of finance with maturities greater than one year. There are two types of capital market instruments, in general. They are fixed income securities and equity securities.

Fixed Income Securities

The fixed income securities are long-term debt instruments having a specified payment or repayment schedule. These are often called bonds or debentures. They pay interest at fixed rate and at regular intervals. Bond holders or debenture holders have call provisions i.e., they can buy back the securities from the investors at pre-specified prices prior to maturity. The nature of any bond is indicated by its bond indenture. Bond indenture is a legal document that accompanies a bond, which spells out the rights and obligations of the issuer and the Investor. The trustee, who monitors the compliance with the indenture and initiates legal action on behalf of the bond holders, is identified in the bond indenture. Other things that are listed in the indenture include collaterals, limits on executive salary, additional debt, future dividends and payment dates. Many bonds have a sinking hind provision, which requires the corporation to retire a certain percentage.

Corporate bonds: Corporate bonds are long-term debt securities issued by corporations or private firms. Most corporate bonds are term bonds that mature, anytime between 5 to 40 years. A corporate may have more than one debt outstanding at any point of time. All corporate bonds expose investors to some degree of credit risk. Bonds with ratings below BBB as per the ratings of credit rating agencies are called junk bonds. Corporate bonds are senior securities i.e. they are senior to preferred stock and common stock in terms of priority of payment or in case of bankruptcy and liquidation.

Corporate bonds can be broadly classified into three types:-

Secured bonds (or Mortgage bonds) - These bonds give their owners legal claims to specific assets, in case, the issuer goes bankrupt. In this type of bonds, specific assets are pledged as collateral. Mortgage bonds are explained under a separate heading "Asset-Backed Securities" later in this chapter.

Unsecured bonds - These are also known as debentures. These are backed by full faith and credit of the issuer, but no specific asset or collateral is pledged. Debenture-holders are general creditors of the issuer i.e. if the company's assets are liquidated in bankruptcy their claims are junior to mortgage bondholders. Debentures that have a secondary claim to general assets the revenues of a firm in the event of bankruptcy are called.

Income bonds - They are the corporate equivalent of municipal revenue bonds. They finance the revenue generating assets. Unlike other corporate bonds, an income bond carries a commitment to pay interest and principal, only if income from the asset is sufficient. Most corporate bonds have call provisions. Usually, there is a modest premium paid above par value by the corporation to the bondholders when exercising this call some bonds are convertible into common stock at a pre-specified price. Typically, the bonds are handed over to the

corporation in exchange for a specified number of common shares, without any cash payment. This is attractive to the investors because investors can benefit from appreciating stock prices by converting into common shares while being protected from the depreciating stock prices by retaining the bond status. Thus, the prices of the convertibles fluctuate depending on whether they are currently trading like bonds (fixed income securities) or common stock.

Asset backed securities (ABS): Asset Backed Securities are those securities which are issued against some type of asset as additional security such as credit card receivables or mortgages. Pooling a large number of small loans into a large debt instrument and selling the ownership of combined cash flow to the new investors create these securities. Generally a separate trust is established that formally owns the assets. This trust referred to as special purpose trust, purchases the assets from the originating institutions and sells ownership rights to the general public. The owner has an equity interest in the trust that owns the assembled assets the timely payment to owners of the trust is assured by four ways: insurance or third party guarantees, over collateralization, a senior/ subordinate ownership structure and use of reserved fund or cash collateral pool. These are secured bonds i.e., they give their owners legal claims to specific assets in case the issuers go bankrupt. Thus, if the company (issuer) is not able to pay its bond holders, the interest or the principal, the bond holders have the right to sell the security and get back their dues. These are considered to be high quality securities with minimum credit risk. All asset- backed securities are insured, which means that the insurer in the event of default pays the outstanding principal. The most common asset backed security is the mortgage bonds i.e., the bonds backed by real collateral assets. Bonds backed by rolling stock such as train, car, etc. are termed equipment obligations. Bonds backed by marketable securities are known as collateral trust bonds. ABS is issued to finance car loans, credit receivable, home equity debt, lease agreements, and corporate receivables. The advent of ABS has allowed debts to be freely traded in order to reduce the cost of debt and increases everyone's access to the wonderful world of "buy now and pay later". However, the main disadvantage of ABS is their uncertain maturities. Although, the maturity period of these securities is 40 years, most of the owners, payoff their mortgage or the assets pledged well before maturity. As a result, the investors receive varying amounts of monthly payments depending on how quickly the mortgage is paid off. As the pool is liquidated immediately as mortgages are paid off, the ABS could mature any time between one day and forty from the date of issue.

Foreign bonds: Government and corporations throughout the world issue debt securities outside their own countries. The bonds of different countries are known by different names. For example, foreign bonds issued in the U.S. are called Yankee bonds whereas those issued in UK are called Bulldog bonds. Many companies issue Eurobonds and Euro yen bonds. Eurobonds are the bonds denominated in US dollars but issued outside the US. Euro yen bonds are the bonds denominated in Japanese yen but issued outside Japan. A foreign bond may be very attractive to investors because the dollar yield is much higher than the Indian rupee and their risk on the portfolio is diversified. Although the foreign bonds appear to be attractive to the investors, they expose the investors to the risk of adverse changes in foreign exchange rates or, in other words, price fluctuations.

Government bonds: Bonds issued by the central government, state government or quasi government agencies are called government bonds or gilt-edged securities. Maturity of these bonds is between three to twenty years. Although they are interest-bearing securities, the rate of interest is very low. The main investors of these bonds include banks, financial institutions, insurance companies and provident funds. Basically these gilt-edged securities are of three types - Bearer Security, Provisionary notes and Debentures. Bearer Security - interest and other payments are made to the bond holder. Provisionary notes - It contains a promise by the President of India or the Governor of the state to meet the debt obligation as per schedule. It can also be transferred by endorsement. The new bond holder should present the note to the government treasury in order to receive interest or other payments. Debentures - It carries the name of the bond holder(s) and is registered with the Public Debt Office, which pays interest to the holders on the specified date.

Agency bands: These bonds are issued by the federal agencies or federally sponsored agencies- Federal agencies are owned and managed by the federal government. Their securities have the full faith and credit of the treasury. Federally sponsored agencies are privately owned but are sponsored by the federal government. They sell their own securities in the market in order to raise funds. The government does not guarantee their security. The credit quality of the agency bonds is perceived to be very high. Their yield is higher than marketable Treasury bond. Markets for agency bonds are usually not as liquid as their treasury counterparts. Interest payment may be made monthly, quarterly, half-yearly or annually. Some agency bonds are marketable. There are three international organizations, partially sponsored by the US government, that issue agency bonds. They are: Asian Development Bank, Inter-American Development Bank and the World Bank.

Zero-coupon bonds: These bonds are issued with no coupons, or interest to be paid during the life of the bond. The purchaser buys these bonds at a price less than the face value and receives the face value at maturity. The difference between the two prices is the total return earned by the investor. One of the main examples of this type of bonds is the T-bill, which are sold at discount and redeemed at par.

RBI Relief bonds: Technically these bonds are called Government of India Relief Bonds. But since, they are issued by Reserve Bank of India; they are also referred to as RBI Relief Bonds. The bonds are issued in the form of Bond Ledger Account or in the form of Promissory Notes. The minimum amount of investment is Rs. 1000 with no maximum limit. The maturity period is

5 years from the date of issue. The rate of interest is 8 percent paid semi-annually. The interest earned is tax-exempt. These bonds can be pledged as a collateral security to banks to avail loans. Moreover, nomination facility is available.

Warrant Bonds: Bonds with warrants are called warrant bonds. A warrant entitles its holders to subscribe to the equity capital of a company during a specified period at a particular price. This price, also referred to as subscription price, is generally higher than the market price of the shares at the time of issue. Each bond has a warrant attached to it, which gives the right to

the bondholder to pay a subscription price and exchange the bonds for equity share. Though he has the right, it is not obligatory for the investor to acquire the equity shares. It is his option whether to subscribe to the equity capital or continue to retain the bond along with the warrant. There are two types of warrant bonds - detachable and non-detachable.

Detachable warrant bonds: The warrant can be sold separately and the holder continues to retain the instrument to which the warrant was tied. The warrant is usually sold during price increase.

Non- Detachable warrant bonds: Separate sale of the warrant independent of the instrument to which it was attached is not possible.

Equity Securities:

Equity securities represent an ownership claim in a corporation. They are the residual claimants after the payment of all obligations to the fixed income securities. There are two types of equity ownership: Common Stock and Preferred Stock.

Common stock: Common stock is the first security of a corporation to be issued and in the event of bankruptcy/ the last to be retired. It represents an ownership share in the firm; it has the lowest priority claim on earnings and assets of all security issued. Unlike bond holders, who are creditors, stock holders are owners. They are the residual claimants i.e., if the company liquidates its assets, the common stockholders get whatever remains after all the debt is paid. In case, the company goes bankrupt, stockholders lose no more than what they paid for their stock. They are not fully liable for corporate debts. Since, the common stock holders are legal owners of a company they enjoy certain rights such as voting rights. They generally have the power to vote for board of directors and on other major issues facing the company. Each share normally gives its owner one vote. The more shares an investor has, the more votes he controls. Common stockholders also have preemptive rights i.e., right of the shareholders to purchase newly issued shares of stock before the general public buys. When a company decides to sell additional shares of common stock, the percentage of shares controlled by the existing shareholders is diluted, thereby, diluting their proportionate ownership in the company. Preemptive rights prevent this dilution by giving existing shareholders the right to purchase any new share offerings before other investors. These rights, usually, expire after a specific time period set, after which any remaining shares of a new issue can be sold to outside investors. A common stockholder receives a certificate of ownership that states the number of shares owned and face value or par value per share.

Foreign equities/Foreign stock: Equity shares or common stock of foreign companies can also be traded on an exchange or a market in another country. This can be done in two ways. Firstly, the shares of British Petroleum can be bought on the London Stock Exchange but the shares would be priced in British currency. However, buying shares in foreign markets is both cumbersome and expensive. The second alternative is through Global/American Depository Receipts (GDRs/ADRs). A GDR/ADR is an instrument issued abroad and is traded on a foreign stock exchange. It represents indirect ownership of a specified number of shares of a foreign

company. ADRs are denominated in US dollars and traded on US stock exchanges. These shares are issued by US banks, called depositories, thus, ADRs are tradable receipts issued by depositories that have physical possession of the foreign securities through their foreign correspondent banks. The securities are to be held on deposit as long as ADRs are outstanding. ADR holders are entitled to all stock and cash dividends paid by the foreign shares. Thus, the dividends are paid in local currency (dollars). The bank holding the securities collects the dividends and pays this amount to the ADR holders. ADRs can be set up directly by a bank at the request of the foreign company. Such ADRs are called sponsored ADRs. They can also be set up at the request of US market makers and are called un-sponsored ADRs. ADRs do not carry any voting rights. The ADR holders can choose to convert their ADRs into the specified number of foreign shares that it represents. After conversion, the underlying shares are traded on the domestic stock exchanges.

Preferred stock: Preferred stock is a hybrid security with characteristics of both common stock and bonds. Like common stock, it represents an equity ownership on the firm's assets and pays a fixed rate dividends or floating rate dividend annually. If the issuer of preferred stock fails to pay the dividend, holder of preferred shares do not have any legal recourse. But cumulative provisions, which ensure that when the payment of dividend is resumed, the unpaid dividends will have to be paid before common shareholders receive any dividend, usually protect them. Although there is no legal binding for a corporation to pay preference dividends, preference shareholders receive dividends, if paid, after the bondholders but before the common stock holders. But they are not considered creditors in case of bankruptcy. It is similar to bonds because, like bonds, it has no voting rights and their claim to firm's assets is senior to common stockholders. Preference shares have no maturity. Dividend is paid over an infinite life but at a fixed rate. They are usually convertible, callable and have sinking fund provisions. The dividend rate is linked to the par value.

Derivative Market Instruments

These securities derive their value in whole, or in part by having a claim on some underlying security, i.e. their value depends on the value of the underlying assets. Derivative securities are of two types - options and futures. Both of them have Standardized features that allow them to be traded quickly and cheaply on organized exchanges. They help the investors to limit portfolio risk by providing risk control possibilities. They are, basically used for hedging and speculating.

Forwards, Futures, Options, Warrants, Swaps, etc. are the derivative instruments being used by the investors. We will discuss in detail about the derivative instruments in the later part of this book.

1.10.2.2 Indirect Investment

As an alternative to purchasing financial assets themselves, investors can invest indirectly through investment companies. Rather than investing directly in securities, the investors can invest in a portfolio of securities by purchasing the shares of a financial Intermediary or investment company that invests in various types of securities. The investment company does

all the work for the investor. Investors purchase share of an investment company, the investment company invests the funds raised from the investor in a portfolio of security. The investors are entitled to a pro rata share of the dividends interest and the capital gains/ losses generated. In return, the shareholders must also pay a pro rata share of the company's expenses and its management fee which will be deducted from the earnings as it flows back to the shareholders. Thus, an investment company is a financial company that sells its shares to the public and uses the funds raised to invest in a portfolio of securities. By pooling the funds of various investors, a widely diversified portfolio can be purchased and the investment company can offer its shareholders a variety of services. This type of Investment Company is commonly known as Mutual Funds.

Shares of mutual funds do not trade on secondary market. To sell the shares, one has to redeem them (i.e. sell them back to the fund) at NAV. The net asset value (NAV) is the per share value of the portfolio of securities held by the investment company.

Mutual funds can be broadly classified into three types on the basis of the nature of the scheme, objectives and asset-mix. On the basis of the nature of the scheme, mutual funds are of two types—open-ended funds and close-ended funds. On the basis of investment objectives, the mutual funds are of four types: growth funds, income funds, balanced funds and tax saving funds. On the basis of the asset mix, mutual funds are of four types, viz., equity funds, bond funds, hybrid funds and money market funds.

1.10.3 Real Assets

Real assets are physical assets having a high intrinsic value. The appreciation is very-high, higher than other kinds of securities but the rate at which they are purchased is also higher. Therefore, people with a high income can only invest in such assets. Given the right set of circumstances, real assets can produce impressive returns. But financial assets (stocks and bonds) have produced far better returns than real assets over long periods of time. Historically, real assets were superior to paper assets only during periods of high inflation, especially, when future rates of inflation seemed difficult to predict. When inflation is low, and future inflation rate is more predictable, paper assets tend to do much better than real assets. The most common types of real assets are - real estate, precious metals, precious stones and art objects.

Real Estate: The most common types of real estate are land and housing property. In addition to providing attractive returns and significant tax savings, investing in real estate also gives a pride of ownership.

Precious Metals: The most common precious metals are - gold and silver. Gold is one of the world's oldest investments. In India, it is used primarily, as a form of saving by the housewives that gives a sense of security. It is fixed security usually not transacted (sold or purchased) with a view to nuke profit or income on investment. Appreciation in gold is very rapid. Hence it is used as a hedge against inflation. It is highly liquid and aesthetically very attractive. They are used more for speculation rather than for a long-term investment or quick profits. However, they do not provide any regular Current income and have no tax advantage associated with them. Like gold, silver has also been a hedge during inflation. The price of silver is less than

gold but keeps on increasing, like gold. The price of gold and silver is quoted daily in the stock exchange list. Gold and silver are sold in gram and kilogram units respectively.

Stones: Because of their aesthetical appeal and rarity, precious stones such as diamonds, rubies, emeralds, sapphires and pearls have appealed to investors since times immemorial. Unlike gold and silver, diamonds are valued in carats.

Art Objects: Objects whose production requires skill, taste, creativity, talent and imagination are referred to as art objects e.g. paintings, sculptures, antiques etc. The value of an art object depends on its aesthetical appeal, rarity, historical importance, reputation of the creator, physical condition etc. the longer the time of holding the art objects, the greater is the value of these assets.

Although precious metals, precious stones and art objects have so far produced impressive results, these instruments are more risky than real estates. The value is totally dependent on the eye of the beholder. Investment in real assets has following disadvantages:

- They do not provide regular current income. All returns come in the form of price appreciation. Rather, the investor has to incur the costs of insurance and storage.
- Determination of quality and value of real assets is quite subjective. It is not easier to put a fair value on a stock or bond than on real assets.
- Real assets lack liquidity i.e. they cannot be sold out easily and quickly. Moreover the cost of buying and selling real assets is high.
- The investor, himself, is responsible for the safekeeping of the real assets. Insurance can be quite expensive and difficult to obtain.
- Many investors are sometimes, attached emotionally to the real assets. It is not possible for them, ever, to sell those assets and hence will never be able to make money from the investment.