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Subject: Investment Management (Major Based Elective)

Class: III B.Com. Computer Application

Unit – I: Investment – Objective of Investment – Investment vs Speculation – Investment Process – Sources of Investments

Security analysis is a pre-requisite for making investments. In the present day financial markets, investment has become complicated. One makes investments for a return higher than what he can get by keeping the money in a commercial or cooperative bank or even in an investment bank. In the finance field, it is a common knowledge that money or finance is scarce and that investors try to maximise their return. But the finance theory states that the return is higher, if the risk is also higher. Return and risk go together and they have a trade off. Most of the investments are risky to some degree. The art of investment is to see that the return is maximised with the minimum of risk, which is inherent in investments. If the investor keeps his money in a bank in savings account, he takes the least risk, as the money is safe and he will get back when he wants it. But he runs the risk that the return in real terms, adjusted for inflation is negative or small and even if positive, it may not come up to his expectations or needs.

In the above discussion, we concentrated on the word 'Investment'. But for making investment, we need to make security analysis. It then becomes necessary to define properly investment and security analysis at the outset.

1.2. Investments: meaning, types and characteristics

Financial markets have the basic function of mobilising the investments needed by corporate entities. They also act as marketplaces for investors who are attracted by the returns offered by the investment opportunities in the market. In this context there is a need to understand the meaning of investment and the motives of investment. Investment may be defined as an activity that commits funds in any financial/physical form in the present with an expectation of receiving additional return in the future. The expectation brings with it a probability that the quantum of return may vary from a minimum to a maximum. This possibility of variation in the actual return is known as investment risk. Thus every investment involves a return and risk.

Investment is an activity that is undertaken by those who have savings. Savings can be defined as the excess of income over expenditure. However, all savers need not be investors. For example, an individual who sets aside some money in a box for a birthday present is a saver, but cannot be considered an investor. On the other hand, an individual who opens a savings bank account and deposits some money regularly for a birthday present would be called an investor. The motive of savings does not make a saver an investor. However, expectations distinguish the investor from a saver. The saver who puts aside money in a box does not expect excess returns from the savings. However, the saver who opens a savings bank account expects a return from the bank and hence is differentiated as an investor. The

expectation of return is hence an essential characteristic of investment. An investor earns/expects to earn additional monetary value from the mode of investment that could be in the form of physical/financial assets. A bank deposit is a financial asset. The purchase of gold would be a physical asset. Investment activity is recognised when an asset is purchased with an intention to earn an expected fund flow or an appreciation in value.

An individual may have purchased a house with an expectation of price appreciation and may consider it as an investment. However, investment need not necessarily represent purchase of a physical asset. If a bank has advanced some money to a customer, the loan can be considered as an investment for the bank. The loan instrument is expected to give back the money along with interest at a future date. The purchase of an insurance plan for its benefits such as protection against risk, tax benefits, and so on, indicates an expectation in the future and hence may be considered as an investment.

From the above examples it can be seen that investment involves employment of funds with the aim of achieving additional income or growth in value. The essential quality of an investment is that it involves the expectation of a reward. Investment, hence, involves the commitment of resources at present that have been saved in the hope that some benefits will accrue from them in the future.

1.2.1. Types of investments

Investments may be classified as financial investments or economic investments. In the financial sense, investment is the commitment of funds to derive future income in the form of interest, dividend, premium, pension benefits, or appreciation in the value of the initial investment. Hence, the purchase of shares, debentures, post office savings certificates, and insurance policies are all financial investments. Such investments generate financial assets. These activities are undertaken by anyone who desires a return and is willing to accept the risk from the financial instrument.

Economic investments are undertaken with an expectation of increasing the current economy's capital stock that consists of goods and services. Capital stock is used in the production of other goods and services desired by the society. Investment in this sense implies the expectation of formation of new and productive capital in the form of new constructions, plant and machinery, inventories, and so on. Such investments generate physical assets and also industrial activity. These activities are undertaken by corporate entities that participate in the capital market.

Financial investments and economic investments are, however, related and dependent. The money invested in financial investments is ultimately converted into physical assets. Thus, all investments result in the acquisition of some asset, either financial or physical. In this sense, markets are also closely related to each other. Hence, the perfect financial market should reflect the progress pattern of the real market since, in reality, financial markets exist only as a support to the real market.

1.2.2. Characteristics of investment

The features of economic and financial investments can be summarised as return, risk, safety, and liquidity.

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 expectation of a return may be from income (yield) as well as through capital appreciation. Capital appreciation is the

difference between the sale price and the purchase price of the investment. The dividend or interest from the investment is the yield. Different types of investments promise different rates of return. The expectation of return from an investment depends upon the nature of investment, maturity period, market demand, and so on. The purpose for which the investment is put to use influences, to a large extent, the expectation of return of the investors. Investment in high growth potential sectors would certainly increase such expectations. The longer the maturity period, the longer is the duration for which the investor parts with the value of the investment. Hence, the investor would expect a higher return from such investments.

Risk: Risk is inherent in any investment. Risk may relate to loss of capital, delay in repayment of capital, non-payment of interest, or variability of returns. While some investments such as government securities and bank deposits are almost without risk, others are more risky. The risk of an investment is determined by the investment's maturity period, repayment capacity, nature of return commitment, and so on. The longer the maturity period, greater is the risk. When the expected time in which the investment has to be returned is a long duration, say 10 years, instead of five years, the uncertainty surrounding the return flow from the investment increases. This uncertainty leads to a higher risk level for the investment with longer maturity rather than on an investment with shorter maturity.

Safety: The safety of investment is identified with the certainty of return of capital without loss of money or time. Safety is another feature that an investor desires from investments. Every investor expects to get back the initial capital on maturity without loss and without delay. Investment safety is gauged through the reputation established by the borrower of funds. A highly reputed and successful corporate entity assures the investors of their initial capital. For example, investment is considered safe especially when it is made in securities issued by the government of a developed nation.

Liquidity: An investment that is easily saleable or marketable without loss of money and without loss of time is said to possess the characteristic of liquidity. Some investments such as deposits in unknown corporate entities, bank deposits, post office deposits, national savings certificate, and so on are not marketable. There is no well-established trading mechanism that helps the investors of these instruments to subsequently buy/sell them frequently from a market. Investment instruments such as preference shares and debentures (listed on a stock exchange) are marketable. The extent of trading, however, depends on the demand and supply of such instruments in the market for the investors. Equity shares of companies listed on recognised stock exchanges are easily marketable.

A well-developed secondary market for securities increases the liquidity of the instruments traded therein. An investor tends to prefer maximisation of expected return, minimisation of risk, safety of funds, and liquidity of investments.

1.3. Objectives of investment

A prudent and consistent saving habit lets income earners to set aside a certain amount of current income for future consumption. Savings kept as cash do not result in an incremental return. Hence, savings are invested in assets with the desired risk-return characteristics. The main objective of an investment process is to minimise risk while simultaneously maximising the expected returns from the investment and assuring safety and liquidity of the invested assets.

Investors look for growth/increase in current wealth through investment opportunities. Given an investment environment, an investor's preference will be for investment opportunities that give the highest return. Investors desire to earn as large returns as possible but with the minimum of risk. Risk can also be stated as the probability that the actual return realised from an investment may be different from the expected return. Financial assets can be grouped into different classes of risk based on the return. Government securities constitute the low risk category as there is very little deviation from expectations and hence are riskless. Shares of corporate entities would form the high-risk category of financial assets as their returns depend on many uncontrollable factors. An investor would be prepared to assume a higher risk only if the expected return is proportionately higher. Hence, there is a trade-off between risk and return.

The objective of safety and liquidity helps an investor to design a retirement plan. This is done to substantiate an investor's earnings beyond the employment tenure. With this in mind, the investor sets aside a part of the current income in growth/income-yielding assets that would give an assured return after a period of time. Savings kept as idle cash do not become investments since it loses its value over time due to rise in prices. This rise in prices, or inflation, invariably erodes the value of money. Investments are, hence, made with the objective to provide a hedge or protection against inflation over the investment duration. This time value concept necessitates investors to choose asset types that will enable them to retain at least the cash value held at present over a future period. In effect, the real rate of return would be negative if the investment cannot earn a higher return than the inflation rate. For example, if inflation is at an average annual rate of 4 per cent, then the expected return from an investment should be above 4 per cent to help savings funds to flow into investment avenues. The objective of investment hence can be stated as giving an expected return from the asset that is higher than the prevalent inflation rate in the economy.

The third objective of investment is the utilisation of tax incentive schemes offered by the government. In order to foster investment habits, many economies offer incentives in the form of tax-saving schemes. Tax rates are applicable for a fiscal year; therefore, to cut down on immediate tax expenditures as investor would invest in tax saving investment schemes offered by the government. This objective of the investor to reduce present tax payments and hence invest in tax-saving schemes can be considered as a short-term investment objective. Tax-saving schemes also offer a marginal return to the investors. Based on the tax policies of the country, investment criteria could solely depend on this factor also.

1.5. Investment vs. Speculation

Investment and speculation both involve the purchase of assets such as shares and securities, with an expectation of return. However, investment can be distinguished from speculation by risk bearing capacity, return expectations, and duration of trade. The capacity to bear risk distinguishes an investor from a speculator. An investor prefers low risk investments, whereas a speculator is prepared to take higher risks for higher returns. Speculation focuses more on returns than safety, thereby encouraging frequent trading without any intention of owning the investment. The speculator's motive is to achieve profits through price change, that is, capital gains are more important than the direct income from an investment. Thus, speculation is associated with buying low and selling high with the hope of making large capital gains. Investors are careful while selecting securities for trading. Investments, in most

instances, expect an income in addition to the capital gains that may accrue when the securities are traded in the market. Investment is long term in nature. An investor commits funds for a longer period in the expectation of holding period gains. However, a speculator trades frequently; hence, the holding period of securities is very short.

The identification of these distinctions helps to define the role of the investor and the speculator in the market. The investor can be said to be interested in a good rate of return on a consistent basis over a relatively longer duration. For this purpose the investor computes the real worth of the security before investing in it. The speculator seeks very large returns from the market quickly. For a speculator, market expectations and price movements are the main factors influencing a buy or sell decision. Speculation, thus, is more risky than investment.

In any stock exchange, there are two main categories of speculators called the bulls and bears. A bull buys shares in the expectation of selling them at a higher price. When there is a bullish tendency in the market, share prices tend to go up since the demand for the shares is high. A bear sells shares in the expectation of a fall in price with the intention of buying the shares at a lower price at a future date. These bearish tendencies result in a fall in the price of shares. A share market needs both investment and speculative activities. Speculative activity adds to the market liquidity. A wider distribution of shareholders makes it necessary for a market to exist.

1.6. Investment Vs Gambling

Investment can also be distinguished from gambling. Examples of gambling are horse race, card games, lotteries, and so on. Gambling involves high risk not only for high returns but also for the associated excitement. Gambling is unplanned and unscientific, without the knowledge of the nature of the risk involved. It is surrounded by uncertainty and a gambling decision is taken on unfounded market tips and rumours. 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 that offer safety of principal and expected returns over a long period of time. Hence, gambling is quite the opposite of investment even though the stock market has been euphemistically referred to as a “gambling den”.

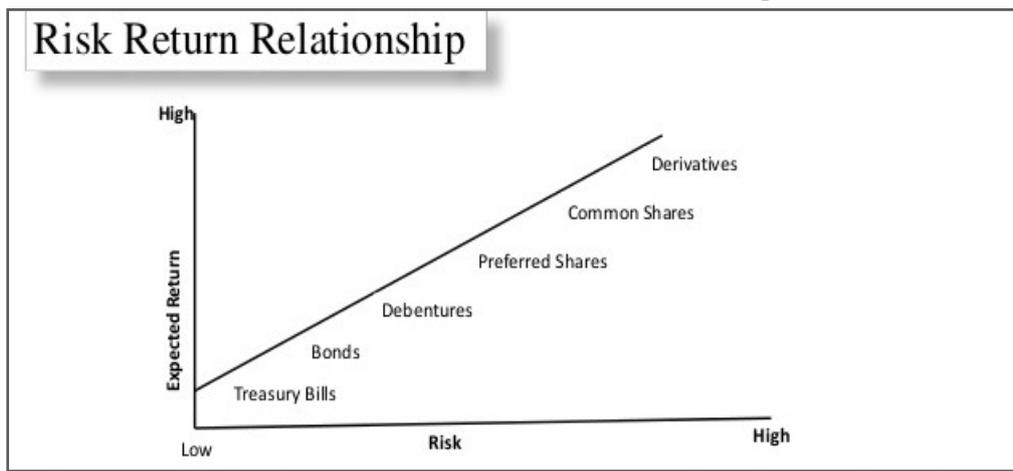
Unit – II: Risk - Systematic and Unsystematic risk - risk and return, Capital and Revenue returns. (Theory Only)

If the investor invests in debentures/bonds, the return is certain till the company is performing well. Debentures/bonds assure definite return for the going concern. But if the company goes on liquidation, investors in debentures may/may not get their investment back as it is based on the surplus assets available to debenture holders. Investors who invest in debentures/bonds may have lesser risk as compared to fixed deposit holders of bank/post office.

Investors who invest in preference shares will get regular return whenever the company earns profit. If the company incurs loss in a year the preference shareholders will not get any return in that particular year but in the subsequent years when the company earns profit the preference shareholders will receive arrears of dividend. Investment in preference shares may have some risks when compared with investment in debentures/bonds. At the

time of liquidation, the preference shareholders will receive their principal amount only if any excess/surplus amount is available after paying debenture holders.

Equity shares are one of the financial securities issued by the company to raise long-term capital. Equity shareholders are eligible to receive the surplus money earned by the company. After making all the payments and statutory reserves the surplus profit can be distributed to the equity shareholders. Suppose if the company incurs loss in any year, dividend will not be distributed to the equity shareholders. If the company goes on liquidation, the equity shareholders will get back their investment from the company if any surplus amount is available after all the settlements are made. From this, one can understand that the risk and return will vary from investment to investment. Therefore, investors will select securities based on the risk assessment and return expected on the investment.



Source: <https://www.slideshare.net/olufemi01/risk-return-basics-for-investing>

The above chart shows the relationship between the expected return on different securities and risks associated with those securities. X-axis shows the risks at different levels and Y-axis shows the different levels of expected returns connected with securities. The expected return on treasury bills has zero risk with low level of return (risk free return). The expected return on bonds has higher expected return than treasury bills along with risk proportion. Debentures are having higher expected return than treasury bills and bonds along with the proportion of risk. Preference shares have their own expected return for the risk taken by them. Investment in common stock has higher returns than treasury bills, bonds, debentures, preference shares along with a higher risk. Lastly, investors in derivatives are having highest expected return for the risk borne by them. Thus, we can conclude that, investors select securities based on their risk taking capacity and return expectation.

3.3. Nature of Investors

Risk taking and required return are the two criterions to be considered while making investment. Risk taking ability is the main factor, which determines securities selection. The investors willing to accept risk to get higher return on their investment are taking takers. Based on the risk tolerance level they will select securities. The investors who are reluctant to take risk while making investment are called risk averters. Investors who are willing to bear risk at certain level called as moderate risk takers.

| Nature of Investors | Investment Avenue Preferred | Expectation as Return |
|---------------------|-----------------------------|-----------------------|
|---------------------|-----------------------------|-----------------------|

| | | |
|----------------------|--|---|
| Risk takers | Risky Investments | Getting More Return as premium for the higher risk taken |
| Moderate Risk Takers | Moderate risky Investments | Getting moderate Return as premium for the moderate risk taken |
| Risk Averters | Less risky Investment/No risky Investments | Getting very less amount as Return for small risk taken/no risk taken |

All investors except those who made their investment in banks and post office expect certain premium for the extra effort made by them in venturesome activities. There may be some variation in getting their expected return. The variability in getting the expected return is called risk. Risk is measured as a deviation of actual outcome from the expected income. Based on the investment, the risk measurement will be varying.

3.4. Classifications of Risk

According to the Modern Portfolio theory, risks are classified into two namely systematic and unsystematic risks.

$$\text{Total risk} = \text{Unique Risk (Unsystematic risk)} + \text{Systematic Risk}$$

3.4.1. Unsystematic Risk

It is unique and peculiar to an industry. It may be due to events like labour strike, an emerging new competitor, development of a new product. These events are specific to an industry and not to all industries in general. Unsystematic risk can be further classified into business risk and financial risk.

3.4.1.1. Business risk

This risk is purely based on the business performance of a concern. This may be caused by shifts in consumer preference, inadequate supply of raw materials, managerial inefficiency and so on. The poor performance of management affects profitability of a concern, which in turn affects the interest of the equity shareholders, sometimes even debenture holders also when the company faces losses in the consecutive years.

3.4.1.2. Financial risk

It is associated with capital structure of a company. Capital structure consists of equity and fixed interest bearing securities namely preference shares and debentures. The company has to pay the return to fixed interest bearing securities. If earnings before the Interest and Tax are more than the Cost of fixed interest bearing securities then the equity shareholders will get benefits out of the capital structure of the company. On the contrary if the Earnings before Interest and Tax is less than the cost of fixed interest bearing securities then interest payment will affect the return of the equity shareholders. As long as the earnings before interest and tax higher than the cost of fixed interest bearing securities, the shareholders interest will increase. Financial risk can be avoided by fixing optimum capital structure.

3.4.2. Systematic risk

It affects the entire market and occurs only because of changes in economic conditions, political situations and sociological changes. The systematic risk is further classified into market risk, Interest rate risk and purchasing power risk.

3.4.2.1. Market risk

Market risk is defined as the portion of variability of return caused by the alternating forces of bull and bear markets (Jack Clark Francis). When the security index moves upward direction for a significant period of time is called bull market. On the contrary, when the security index moves downward for a specific period of time is known as bear market. Security index movements are purely based on the external forces prevailing in the market. The events like earthquake, political uncertainty, war will affect the market conditions of stock market. Sometimes psychological factors namely sentiments and herd behavior of investors towards certain securities are also affect the market. The tangible and intangible events of the will affect the market value of the securities, sometimes over reactions of the investors will adversely affect the market value of securities even below the intrinsic value which are beyond the control of the Corporates.

3.4.2.2. Interest rate risk

Interest rate risk is a variation in a single period rate of return caused by fluctuations in the market interest rate. This risk is caused by changes in the government monetary policy and changes occur in the interest rates of treasury bills and the government bonds. If higher interest rates are offered, investor would like to switch from private sector bonds to public sector bonds. The rise or fall in the interest rate affects the cost of borrowings. Changes in interest rates affects corporate bodies who carry their business mostly on borrowed funds. Increase in interest rate will increase the cost of borrowings eventually reduce the earnings per share.

3.4.2.3. Purchasing power risk

Purchasing power risk occurs due to changes in inflation. If the inflation is more the real return will be very less sometimes it may be negative. Real return is the difference between nominal return and inflation. When the inflation is increasing heavily, the investors prefer to invest their money in equity shares than bond. During inflationary period, cost of raw materials, labour and equipment will be increased and in order to purchase assets investors wish to get more real return. Purchasing power risk affects the real return from bonds, debentures and stock.

3.4.2.4. Social or Regulatory risk

The social/regulatory risk arises only because of adverse legislation, harsh regulatory climate by the socialistic government and intervention of the government in business affairs. This risk is unpredictable and will give adverse impact on profitability, return on investment and value of securities.

3.5. Risk and Return Trade Off

Risk free return is a default risk free return usually obtained from government securities. Suppose, investor wish to get more amount as premium over the risk free return, then investment will be on equity shares/preference shares/debentures. The relationship between return and risk is expressed with the help of equation.

$$\text{Return} = \text{Risk-free rate} + \text{Risk premium}$$

Usually, assets having higher return associated with higher risk. Sometimes these assets fetch more income for certain years and in some other years it will not fetch anything. Investors who have invested their money only in these types of securities will suffer because investors will not get anything in some years. So investors who wish to get constant return should select securities very carefully while constructing their portfolio. Proportionately, the

investors select some securities at high risk level, some securities with low risk level, and some securities at medium risk level and select their portfolio. On overall basis, the investors will get return in all the years. The balance between risk and return should be maintained by selecting optimum portfolio.

3.6. Tools for Measuring Risk

3.6.1. Quantitative/Statistical Measurement of Risk

Variance and standard deviation are the quantitative/statistical measure used to measure risk. Variability is the difference between individual returns over the help of average rate of return. Average rate of return is the sum of different rates of return over the period divided by the number of periods. From variability standard deviation and variance can be found and risk can be measured.

Steps to calculate variance and Standard deviation

1. Calculate average rate of return (Find the total of expected rate of return of individual assets and divide it by number of years/period)
2. Calculate deviation of individual rates of return from the average rate of return
3. Square the deviation
4. Find sum of squares of deviations and divide it by the number of periods/number of periods less one. (For sample observation take n-1 to account for the degree of freedom. For population data, then the divider will be n).
5. Calculate the square root of the variance to determine the standard deviation.

Example: From the returns from a stock over a 6 year period, calculate standard deviation and variance.

$$R_1 = 15\%; R_2 = 12\%; R_3 = 20\%; R_4 = -10\%; R_5 = 14\% \text{ and } R_6 = 9\%$$

| Period | Return R_i | Deviation $(R_i - \bar{R})$ | Square of Deviation $(R_i - \bar{R})^2$ |
|--------|-----------------|--------------------------------|--|
| 1 | 15 | 5 | 25 |
| 2 | 12 | 2 | 4 |
| 3 | 20 | 10 | 100 |
| 4 | -10 | -20 | 400 |
| 5 | 14 | 4 | 16 |
| 6 | 9 | -1 | 1 |

$$\sum R_i = 60$$

$$\bar{R} = 10$$

$$\sum (R_i - \bar{R})^2 = 546$$

$$\sigma^2 = \frac{\sum (R_i - \bar{R})^2}{n - 1} = 109.2 \quad \sigma = \left[\frac{\sum (R_i - \bar{R})^2}{n - 1} \right]^{1/2} = \left[\frac{546}{6 - 1} \right]^{1/2} = 10.45$$

$$\text{Or } \sigma = \sqrt{109.2} = 10.45$$

3.6.2. Behavioural Measurement of Risk

The investor may expect different expected values under different situations. The likelihood of these possible returns may vary. The probability means the likelihood of happening of a particular event. Probability of getting return over the years of holding is

taken into consideration along with returns for calculating risk. The following methods are used to measure risk.

1. Sensitivity analysis
2. Probability distribution

3.6.2.1. Sensitivity Analysis

Under sensitivity analysis, probable returns are estimated under three assumptions namely i) Optimistic ii) Most likely and iii) Pessimistic. It explains how the returns are sensitive under the three circumstances. The return under optimistic condition is more than the return under pessimistic condition.

Example

| Particulars | Asset X | Asset Z |
|-----------------------------|--------------|--------------|
| Initial Outlay | Rs.200 lakhs | Rs.200 lakhs |
| Rate of Return (in percent) | | |
| Pessimistic | 10 | 6 |
| Most likely | 12 | 12 |
| Optimistic | 14 | 18 |
| Range | 4 | 12 |

Asset Z is riskier than Asset X since it has greater range between its Optimistic and Pessimistic approach.

3.6.1.2. Probability Distribution

The probability of getting return may vary from zero to one. If it is zero means the event is not going to be happen. If it is one means the event is certainly going to happen. The probability is 0.60 means the probability of happening an event is 60% and non-happening is 40%. Under this approach, estimate the returns and probability of getting returns.

Example

| Possible outcome | Probability P_i | For Security A | | For Security B | |
|------------------|-------------------|----------------------|------------------------------------|----------------------|------------------------------------|
| | | Rate of Return R_i | Expected Return $E(R) = P_i * R_i$ | Rate of Return R_i | Expected Return $E(R) = P_i * R_i$ |
| 1 | 0.25 | 10 | 2.50 | 8 | 2 |
| 2 | 0.50 | 12 | 6.00 | 14 | 7 |
| 3 | 0.25 | 14 | 3.50 | 18 | 4.5 |
| | | | <u>12.0</u> | | <u>13.5</u> |

The investor will select security B because the expected return in B is more than Security A.

3.7. DIFFERENTIATE INVESTMENT FROM SPECULATION AND GAMBLING

3.7.1. Speculation

It is an activity involved in the securities market on the short-term basis with the intention of earning huge money through trading of securities. The speculation has involved huge risk so the return may be huge but the safety of the initial investment is not guaranteed in the speculation activity.

3.7.2. Gambling

It is an entertainment activity in the security market and it happens in short period of time which means it may be a second or minute. The gamble involves taking huge risk without demanding compensation in the form of expected return on investment. Gamble has very huge risk in the security market than the speculation.

3.7.3 Investment Vs. Speculation Vs. Gambling

| Basis | Investment | Speculation | Gambling |
|---|--|--|---|
| Risk Analysis | Investor relies on the fundamental analysis of financial and other factors which affects the price of asset class | Speculators relay on the flow of the wind without analyzing any fundamental. | Gambler risk entire capital on bet and relay mainly on luck |
| Risk Appetite | In investment, investors have long-term risk and return perspective | Speculators expect higher risk for earning higher returns. | Gamblers are the highest risk taker than the investors and speculators. |
| Level of Risk | Low | Moderate | High |
| Time Frame | Usually take long period of time | Either long or short | Usually short period of time |
| Stability of Income | Very Stable | Unstable or Uncertain | Doubtful |
| Expected Return | Usually positive and somewhat variable | Mixed and highly variable | Usually negative with low variability |
| Price of Assets | Investor does not look at the price of assets itself to determine the decision to allocate some money on assets to get some money back later | Speculators look at the price of assets to allocate the money and they influenced by the daily price fluctuations. | Gambling is based upon odds and bets are placed only on assumptions. |
| Leverages | Investors allocate money from its own resource for investment. | Speculators may relay on borrowed money to allocate. | Gambler allocates their own money and place bet for entertainment or fun. |
| Psychological attitude of participants | Cautious and Conservative | Daring and Careless | Entertainment and Fun |