SECURITY ANALYSIS AND PORTFOLO MANAGEMNT: UNIT- 5

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PORTFOLIO REVISION AND EVALUTION

CONTENTS:

What is a Portfolio ?

A combination of various investment products like bonds, shares, securities, mutual funds and so on is called a portfolio.

In the current scenario, individuals hire well trained and experienced portfolio managers who as per the client's risk taking capability combine various investment products and create a customized portfolio for guaranteed returns in the long run.

It is essential for every individual to save some part of his/her income and put into something which would benefit him in the future. A combination of various financial products where an individual invests his money is called a portfolio.

What is Portfolio Revision ?

The art of changing the mix of securities in a portfolio is called as portfolio revision.

The process of addition of more assets in an existing portfolio or changing the ratio of funds invested is called as portfolio revision.

The sale and purchase of assets in an existing portfolio over a certain period of time to maximize returns and minimize risk is called as Portfolio revision.

Need for Portfolio Revision

- An individual at certain point of time **might feel the need to invest more**. The need for portfolio revision arises when an individual has some additional money to invest.
- **Change in investment goal** also gives rise to revision in portfolio. Depending on the cash flow, an individual can modify his financial goal, eventually giving rise to changes in the portfolio i.e. portfolio revision.
- Financial market is subject to risks and uncertainty. An individual might sell off some of his assets owing to fluctuations in the financial market.

Portfolio Revision Strategies

There are two types of Portfolio Revision Strategies.

Active Revision Strategy

Active Revision Strategy involves **frequent changes** in an existing portfolio over a certain period of time for maximum returns and minimum risks.

Active Revision Strategy helps a portfolio manager to sell and purchase securities on a regular basis for portfolio revision.

Passive Revision Strategy

Passive Revision Strategy involves rare changes in portfolio only under certain predetermined rules. These predefined rules are known as formula plans.

According to passive revision strategy a portfolio manager can bring changes in the portfolio as per the formula plans only.

Portfolio performance evaluation

The portfolio performance evaluation involves the determination of how a managed portfolio has performed relative to some comparison benchmark. Performance evaluation methods generally fall into two categories, namely conventional and risk-adjusted methods. The most widely used conventional methods include benchmark comparison and style comparison. The risk-adjusted methods adjust returns in order to take account of differences in risk levels between the managed portfolio and the benchmark portfolio. The major methods are the Sharpe ratio, Treynor ratio, Jensen's alpha, Modigliani and Modigliani, and Treynor Squared. The risk-adjusted methods are preferred to the conventional methods.

The portfolio performance evaluation primarily refers to the determination of how a particular investment portfolio has performed relative to some comparison benchmark. The evaluation can indicate the extent to which the portfolio has outperformed or under-performed, or whether it has performed at par with the benchmark.

Objectives

The evaluation of portfolio performance is important for several reasons. First, the investor, whose funds have been invested in the portfolio, needs to know the relative performance of the portfolio. The performance review must generate and provide information that will help the investor to assess any need for rebalancing of his investments. Second, the management of the portfolio needs this information to evaluate the performance of the manager of the portfolio and to determine the manager’s compensation, if that is tied to the portfolio performance. The performance evaluation methods generally fall into two categories, namely conventional and risk-adjusted methods.

Risk-adjusted Methods

The risk-adjusted methods make adjustments to returns in order to take account of the differences in risk levels between the managed portfolio and the benchmark portfolio. While there are many such methods, the most notables are the Sharpe ratio (S), Treynor ratio (T), Jensen’s alpha .

Treynor Measure
Jack L. Treynor was the first to provide investors with a composite measure of portfolio performance that also included risk. Treynor's objective was to find a performance measure that could apply to all investors regardless of their personal risk preferences. Treynor suggested that there were really two components of risk: the risk produced by fluctuations in the stock market and the risk arising from the fluctuations of individual securities.

Treynor introduced the concept of the security market, which defines the relationship between portfolio returns and market rates of returns whereby the slope of the line measures the relative volatility between the portfolio and the market (as represented by beta). The beta coefficient is the volatility measure of a stock portfolio to the market itself. The greater the line's slope, the better the risk-return tradeoff.

The Treynor measure, also known as the reward-to-volatility ratio, is defined as:

Treynor Measure= PR-RFR/β

PR= Portfolio Return

RFR= Risk Free Rate

β= beta

The numerator identifies the risk premium, and the denominator corresponds to the portfolio risk. The resulting value represents the portfolio's return per unit risk.

Sharpe's Ratio

The Sharpe ratio is almost identical to the Treynor measure, except that the risk measure is the standard deviation of the portfolio instead of considering only the systematic risk as represented by beta. Conceived by Bill Sharpe, this measure closely follows his work on the Capital Asset Pricing Model. (CAPM) and, by extension, uses total risk to compare portfolios to the capital market line.The Sharpe ratio is defined as:

Sharpe Ratio = PR-RFR/SD

PR= Portfolio Return

RFR= Risk Free Rate

SD = Standard Deviation

Unlike the Treynor measure, the Sharpe ratio evaluates the portfolio manager on the basis of both the rate of return and diversification (it considers total portfolio risk as measured by the standard deviation in its denominator). Therefore, the Sharpe ratio is more appropriate for well-diversified portfolios because it more accurately takes into account the risks of the portfolio.

Jensen Measure

Similar to the previous performance measures discussed, the Jensen measure is calculated using the CAPM. Named after its creator, Michael C. Jensen, the Jensen measure calculates the excess return that a portfolio generates over its expected return. This measure of return is also known as alpha.

The Jensen ratio measures how much of the portfolio's rate of return is attributable to the manager's ability to deliver above-average returns, adjusted for market risk. The higher the ratio, the better the risk-adjusted returns. A portfolio with a consistently positive excess return will have a positive alpha while a portfolio with a consistently negative excess return will have a negative alpha.

The formula is broken down as follows:
Jenson's Alpha= PR-CAPM
Where
PR= Portfolio Return
CAPM= Risk free rate+ β(Return of market risk free rate of return)

Portfolio performance measures are a key factor in the investment decision. These tools provide the necessary information for investors to assess how effectively their money has been invested (or may be invested). Remember, portfolio returns are only part of the story. Without evaluating risk-adjusted returns, an investor cannot possibly see the whole investment picture, which may inadvertently lead to clouded decisions

Constant-Rupee-Value Plan

Different Types of Formula Plans are given below:

1. Constant-Rupee-Value Plan:

The constant rupee value plan specifies that the rupee value of the stock portion of the portfolio will remain constant. Thus, as the value of the stock rises, the investor must automatically sell some of the shares in order to keep the value of his aggressive portfolio constant.

If the price of the stock falls, the investor must buy additional stock to keep the value of aggressive portfolio constant.

By specifying that the aggressive portfolio will remain constant in money value, the plan also specifies that remainder of the total fund be invested in the conservative fund. The constant-rupee -value plan's major advantage is its simplicity. The investor can clearly see the amount that he needed to have invested.

However, the percentage of his total fund that this constant amount will represent in the aggressive portfolio will remain at different levels of his stock's values, investor must choose predetermined action points sometimes called revaluation points, action points are the times at which the investor will make the transfers called for to keep the constant rupee value of the stock portfolio.

Of course, the portfolio's value cannot be continuously the same, since this would necessitate constant attention by the investor, innumerable action points, and excessive transaction costs. In fact, the portfolio will have to be allowed to fluctuate to some extent before action taken to readjust its value.

The action points may be sent according to prespecified periods of time, percentage changes in some economic or market index, or – mostly ideally – percentage changes in the value of the aggressive portfolio.

The timing of action points can have an important effect on the profits the investor obtains. Action points placed dose together cause excessive costs that reduce profits.

If the action points are too far apart, however, the investor may completely miss the opportunity to profit from fluctuations that take place between them.

Main limitation of the constant rupee value plan is that it requires some initial forecasting. However, it does not require forecasting the extent to which upward fluctuations may reach.

In fact, a forecast of the extent of downward fluctuations is necessary since the conservative portfolio must be large enough so that funds are always available for transfer to the stock portfolio as its value shrinks. This step requires knowledge of how stock prices might go.

Then the required size of the conservative portfolio can be determined if the investor can start his constant rupee fund when the stocks he is acquiring are not priced too far above the lowest values to which they might fluctuate, he can obtain better overall results from a constant- rupee- value plan.

Advantages of Constant Rupee Value Plan

The constant rupee value plan offers the following advantages.

1. It is very simple to operate. The investor need not make any complicated calculations.

2. This plan brings funds to the investor for investment.

3. Constant rupee value plan specifies the percentage of the aggressive portfolio for the investment fund. Specified as a percentage to the total fund, the aggressive portfolio will have a constant amount.

Constant Ratio Plan

2. Constant Ratio Plan:

The constant ratio plan goes one step beyond the constant rupee plan by establishing a fixed percentage relationship between the aggressive and defensive components. Under both plans the portfolio is forced to sell stocks as their prices rise and to buy stocks as their prices fall.

Under the constant ratio plan, however, both the aggressive and defensive portions remain in constant percentage of the portfolio’s total value. The problem posed by re- balancing may mean missing intermediate price movements.

The constant ratio plan holder can adjust portfolio balance either at fixed) intervals or when the portfolio moves away from the desired ratio by a fixed percentage.

How do constant ratio plan work?

Constant ratio plan works as follows:

1. When the value of stock rises, it must be sold to make it constant with the value of the conservative portfolio. When the value of stock falls, the investor should transfer funds to common stock.

2. The investor should keep the aggressive value constant of the portfolio’s total value. When the price of stock fall, the investor should transfer from conservative to aggressive value.

3. The investor need not forecast the lower levels at which the prices fluctuate.

4. The core of constant ratio plan lies in the purchase of stock in less aggressive manner as the prices fall.

5. When the stock prices rise, sale of stock is effected in less aggressive manner.

6. The sales and purchase of aggressive stock depend upon the middle range of fluctuations. If the fluctuations in prices are just above the middle range of sales, it is regarded as the most aggressive point. Likewise, if the fluctuations are just below the middle range, it is identified as the least aggressive.

7. When the stock prices fluctuate above the middle range of fluctuations, shares are sold aggressively. Similarly, when the stock prices fluctuate below the middle range of fluctuations, shares are bought aggressively.

8. When there is a continuous and sustained rise or fall in share prices, the investor will make enormous profit.

The advantage of the constant ratio plan is the automatism with which it forces the manager to adjust counter cyclically his portfolio. This approach does not eliminate the necessary of selecting individual securities, nor does it perform well if the prices of the selected securities do not move with the market.

The major limitation for the constant ratio plan, however, is the use of bonds as a haven stocks and bonds are money and capital market instruments, they tend to respond to the same interest rate considerations in the present discounted evaluation framework.

This means, at times, they may both rise and decline in value at approximately the same time. There is a limited advantage to be gained from shifting out of the rising stocks into the bonds if, in the downturn, both securities prices decline.

If the decline in bond prices is of the same magnitude as those in stock prices, most, if not all, of the gains from the constant ratio plan are eliminated. If the constant ratio plan is used, it must be coordinated between securities that do not tend to move simultaneously in the same direction and in the same magnitude.

3. Variable Ratio Plan:

Instead of maintaining a constant rupee amount in stocks or a constant ratio of stocks to bonds, the variable ratio plan user steadily lowers the aggressive portion of the total portfolio as stock prices rise, and steadily increase the aggressive portion as stock prices fall.

By changing the proportions of defensive aggressive holdings, the investor is in effect buying stock more aggressively as stock prices fall and selling stock more aggressively as stock prices rise.

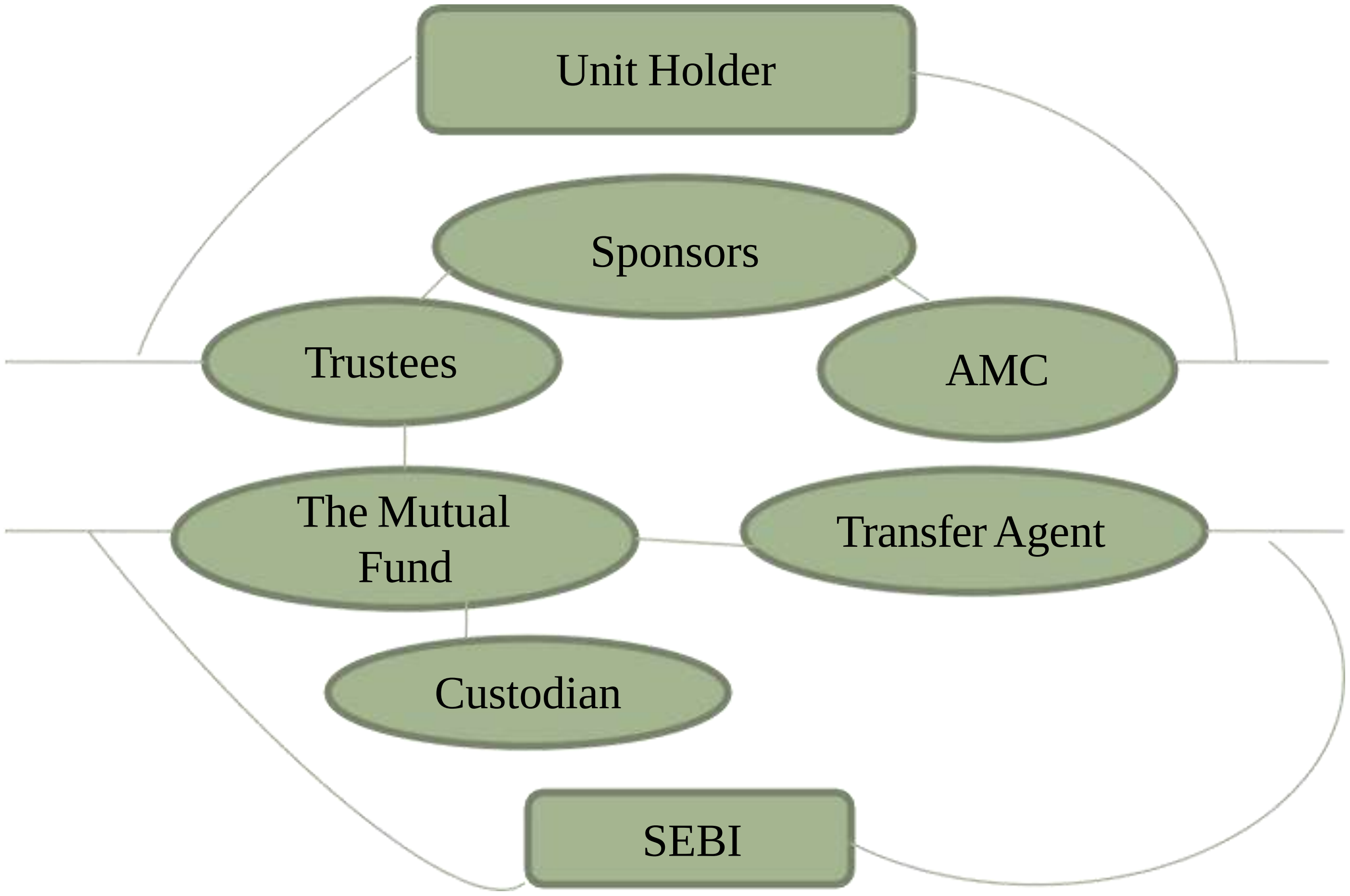
MUTUAL FUNDS

MUTUAL FUND

According to SEBI, Mutual Fund is a mechanism for pooling the resources by issuing units to the investors and investing funds in securities in accordance with objectives as disclosed in offer document.

A Mutual Fund is a portfolio of stocks, bonds, or other securities that is collectively owned by hundreds or thousands of investors and managed by a professional investment company.

ORGANIZATION OF A MUTUAL FUND



ORGANIZATION OF A MUTUAL FUND

- The Sponsor - A Sponsor is a person who acting alone or in combination with another body or corporate, establishes a mutual fund and applies to SEBI for its registration. The sponsor is also closely associated with the AMC. As per SEBI regulations, the sponsor has to contribute a minimum of 40% of the net worth of the AMC.

- The Board of Trustees(BOT) – A person or a group of persons having an overall supervisory authority over the fund managers, they ensure that the managers keep to the trust deed that the unit prices are calculated correctly and the assets of the funds are held safely.

ORGANIZATION OF A MUTUAL FUND

- The Asset Management Company (AMC) – A company set up primarily for managing the investment of mutual funds. It makes investment decisions in accordance with the scheme objectives, deed of trust and provisions of the Investment management Agreement.

- The Custodian – Custodian is registered with SEBI, holds the securities and other assets of various schemes of the fund in its custody.

- The Unit Holders – A person who holds Unit(s) a Mutual Fund.

Features

- **Mobilizing small savings:** mutual funds mobilize funds by selling their own shares known as units. This gives the benefit of convenience and satisfaction of owning shares in many industries. Mutual fund invest in various securities and pass on the returns to the investors.

- **Investment Avenue:** the basic characteristic of a mutual fund is that it provides an ideal avenue for investment for investors and enables them to earn a reasonable return with better liquidity. It offers investors a proportionate claim on the portfolio of assets that fluctuate in value.

- **Professional management:** mutual fund provides investors with the benefit of professional and expert management of their funds. Mutual fund employees professionals/experts who manage the investment portfolios efficiently and profitably. Investors are relieved from the responsibility of following the markets on a regular basis.
- **Diversified investment:** mutual fund have the advantage of diversified investment of funds in various industries and sectors. This is beneficial to small investors who cannot afford to buy shares of established companies at high prices. Mutual fund allow millions of investors who have investments in variety of securities of different companies.
- **Better liquidity:** mutual fund have the distinct advantage of better liquidity of investment. There is always a market available for mutual funds. In case of mutual funds it is obligatory that units are listed and traded thus offering our secondary markets for the funds. A high level of liquidity is possible for the fund holders because of more liquid securities in the mutual fund portfolio

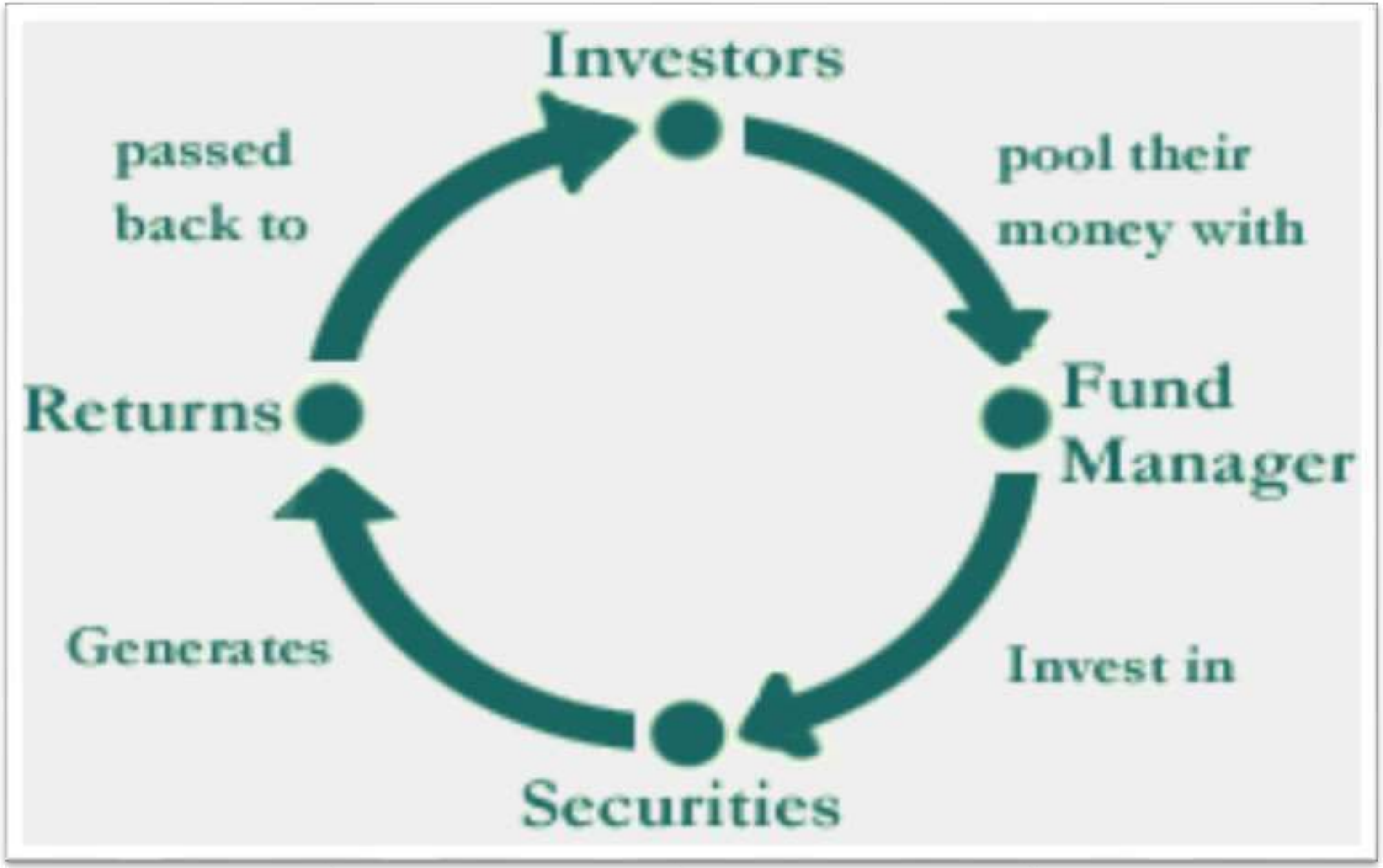
- **Reduced risks:** the risk on mutual fund is minimum. This is because of expert management diversification , liquidity and economies of scale in transaction cost.

- **Investment protection:** mutual funds are regulated by guidelines and legislative provisions put in place by regulatory agencies such as SEBI in order protect the investor interest the mutual funds are obligated to follow the provisions laid down by the regulators.

- **Switching facility:** mutual funds provide investors with the flexibility to switch from one scheme to another, this flexibility enables investors to switch from income scheme to growth scheme and from close ended scheme to open ended scheme.

- **Tax benefits:** mutual funds offer tax shelter to the investors by investing in various tax saving schemes under the provisions provided by the income tax act.
- **Low transaction cost:** the cost of purchase and sale of MF's is relatively lower.
- **Economic development:** MF's contribute to economic development by mobilizing savings and channelizing them to more productive sectors of the economy.
- **Convenience:** MF units can be traded easily with little or no transaction cost.

WORKING OF MUTUAL FUNDS



TYPES OF MUTUAL FUNDs

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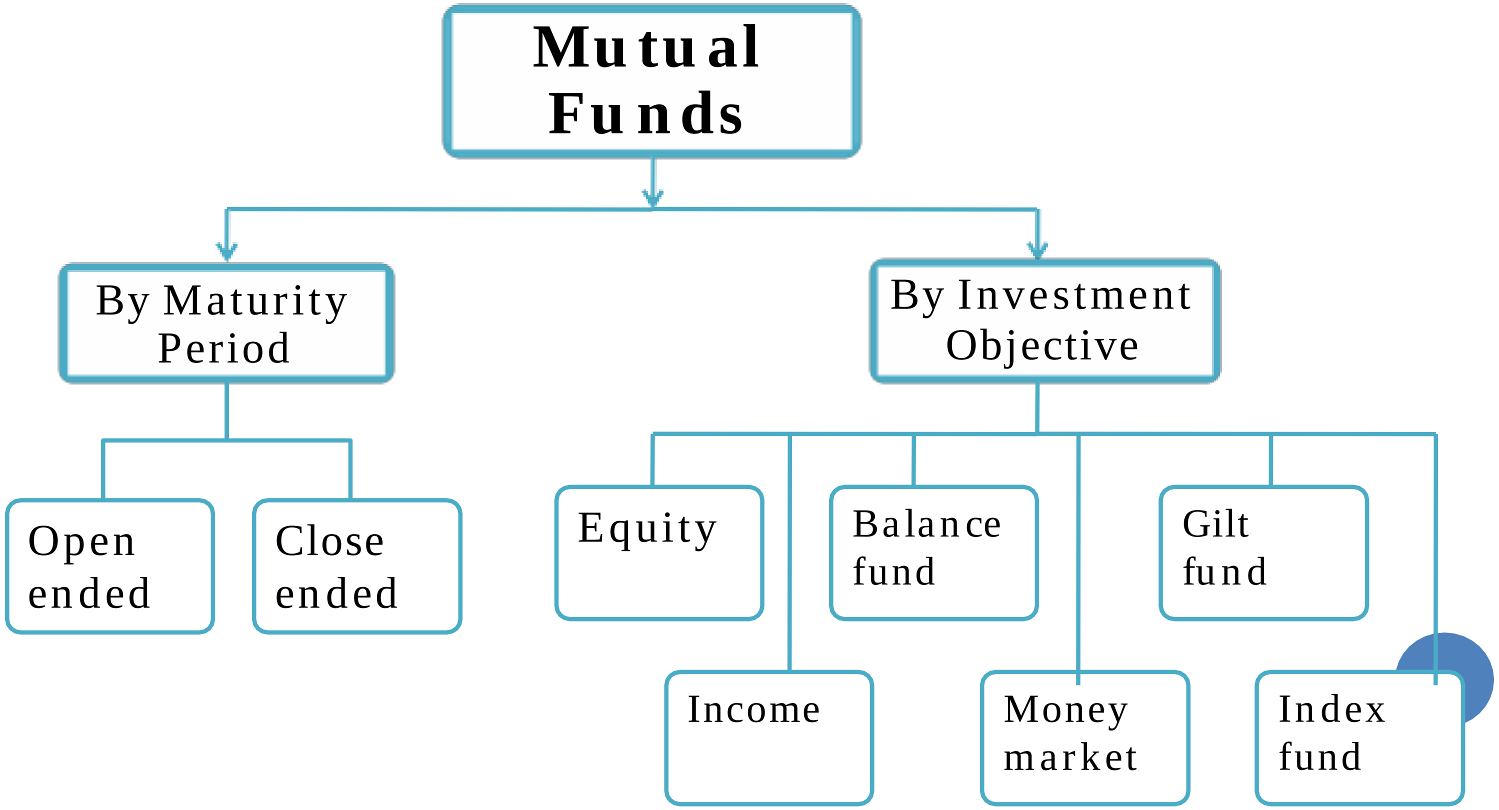

Advantages of Mutual Funds

- Mutual Funds give investors best of both the worlds. Investor's money is managed by professional fund managers and the money is deployed in a diversified portfolio. Mutual Funds help to reap the benefit of returns by a portfolio spread across a wide spectrum of companies with small investments.

- A mutual fund analyses the investments for investors as fund managers assisted by a team of research analysts analyze the market daily.

- Investors can enter / exit schemes anytime they want (at least in open ended schemes). They can invest in an SIP, where every month, a stipulated amount automatically goes out of their savings account into a scheme of their choice.

- There may be a situation where an investor holds some shares, but cannot exit the same as there are no buyers in the market. Such a problem of illiquidity generally does not exist in case of mutual funds, as the investor can redeem his units by approaching the mutual fund.

- As more and more AMCs come in the market, investors will continue to get newer products and competition will ensure that costs are kept at a minimum.

- Investors can either invest with the objective of getting capital appreciation or regular dividends i.e., mutual fund are structured to suit the needs of all investors.

- An investor with limited funds might be able to invest in only one or two stocks / bonds, thus increasing his / her risk. However, a mutual fund will spread its risk by investing a number of sound stocks or bonds. A fund normally invests in companies across a wide range of industries, so the risk is diversified.

- Mutual Funds regularly provide investors with information on the value of their investments. Mutual Funds also provide complete portfolio disclosure of the investments made by various schemes and also the proportion invested in each asset type.

- The large amount of Mutual Funds offer the investor a wide variety to choose from. An investor can pick up a scheme depending upon his risk/ return profile

- All the Mutual Funds are registered with SEBI and they function within the provisions of strict regulation designed to protect the interests of the investor

THANK YOU!!!