

## **Investment management process**

Investment management process is the process of managing money or funds. The investment management process describes how an investor should go about making decisions. Investment management process can be disclosed by five-step procedure, which includes following stages:

1. Setting of investment policy.
2. Analysis and evaluation of investment vehicles.
3. Formation of diversified investment portfolio.
4. Portfolio revision
5. Measurement and evaluation of portfolio performance

**Setting of investment policy:** Is the first and very important step in investment management process. Investment policy includes setting of investment objectives. The investment policy should have the specific objectives regarding the investment return requirement and risk tolerance of the investor. For example, the investment policy may define that the target of the investment average return should be 15 % and should avoid more than 10 % losses.

**Analysis and evaluation of investment vehicles :** When the investment policy is set up, investor's objectives defined and the potential categories of financial assets for inclusion in the investment portfolio identified, the available investment types can be analyzed. This step involves examining several relevant types of investment vehicles and the individual vehicles inside these groups. For example, if the common stock was identified as investment vehicle relevant for investor, the analysis will be concentrated to the common stock as an investment. The one purpose of such analysis and evaluation is to identify those investment vehicles that currently appear to be mispriced. There are many different approaches how to make such analysis.

**Formation of diversified investment portfolio:** Is the next step in investment management process. Investment portfolio is the set of investment vehicles, formed by the investor seeking to realize its' defined investment objectives. In the stage of portfolio formation the issues of selectivity, timing and diversification need to be addressed by the investor. Selectivity refers to micro forecasting and focuses on forecasting price movements of individual assets. Timing involves macro forecasting of price movements of particular type of financial asset relative to fixed-income securities in general. Diversification involves forming the investor's portfolio for decreasing or limiting risk of investment. 2 techniques of diversification:

- Random diversification, when several available financial assets are put the portfolio at random;
- Objective diversification when financial assets are selected to the portfolio following investment objectives and using appropriate techniques for analysis and evaluation of each financial asset.

Investment management theory is focused on issues of objective portfolio diversification and professional investors follow settled investment objectives then constructing and managing their portfolios.

**Portfolio revision:** This step of the investment management process concerns the periodic revision of the three previous stages. This is necessary, because over time investor with long-term investment horizon may change his / her investment objectives and this, in turn means that currently held investor's portfolio may no longer be optimal and even contradict with the new settled investment objectives. Investor should form the new portfolio by selling some assets in his portfolio and buying the others that are not currently held. It could be the other reasons for revising a given portfolio: over time the prices of the assets change, meaning that some assets that were attractive at one time may be no longer be so. Thus investor should sell one asset and buy the other more attractive in this time according to his/ her evaluation. The decisions to perform changes in revising portfolio depend, upon other things, in the transaction costs incurred in making these changes.

**Measurement and evaluation of portfolio performance:** This the last step in investment management process involves determining periodically how the portfolio performed, in terms of not only the return earned, but also the risk of the portfolio. For evaluation of portfolio performance appropriate measures of return and risk and benchmarks are needed. A benchmark is the performance of predetermined set of assets, obtained for comparison purposes. The benchmark may be a popular index of appropriate assets – stock index, bond index. The benchmarks are widely used by institutional investors evaluating the performance of their portfolios.

## Investment return and risk

A return is the ultimate objective for any investor. But a relationship between return and risk is a key concept in finance. As finance and investments areas are built upon a common set of financial principles, the main characteristics of any investment are investment return and risk. However to compare various alternatives of investments the precise quantitative measures for both of these characteristics are needed.

- Return on investment and expected rate of return

General definition of return is the benefit associated with an investment. In most cases the investor can estimate his/ her historical return precisely

Many investments have two components of their measurable return:

- capital gain or loss;
- some form of income.

The rate of return is the percentage increase in returns associated with the holding period:

$$\text{Rate of return} = \text{Income} + \text{Capital gains} / \text{Purchase price} (\%).$$

- The expected rate of return  $E(r)$  of investment is the statistical measure of return, which is the sum of all possible rates of returns for the same investment weighted by probabilities:

$$E(r) = \sum_{i=1} h_i \times r_i$$

Here  $h_i$  - probability of rate of return;  
 $r_i$  - rate of return.

## Investment risk

Risk can be defined as a chance that the actual outcome from an investment will differ from the expected outcome. Obvious, that most investors are concerned that the actual outcome will be less than the expected outcome. The more variable the possible outcomes that can occur, the greater the risk. Risk is associated with the dispersion in the likely outcome. And dispersion refers to variability. So, the total risk of investments can be measured with such common absolute measures used in statistics as

- Variance;
- Standard deviation.

**Variance** can be calculated as a potential deviation of each possible investment rate of return from the expected rate of return:

$$(s^2) = \sum [(x_i - \bar{x})^2] / n - 1$$

To compute the variance in formula all the rates of returns which were observed in estimating expected rate of return ( $x_i$ ).

### **Standard deviation**

The other an equivalent to variance measure of the total risk is **standard deviation** which is calculated as the square root of the variance:

$$s = \sqrt{\frac{1}{N - 1} \sum_{i=1}^N (x_i - \bar{x})^2}$$

N = number of observation in the sample

$X_i$  = rate of return

$\bar{x}$  = arithmetic average of the rates of return

## **Relationship between risk and return**

Risk and return are probably the two main concerns of all investors and we might say that they are two side of the investment coin. The relationship between the two for an investment is that investors will want more return from investments that have greater risk. Thus, investment with higher risk levels should have higher level of return.

Risk and return is an important concept in investment. It takes into account risk aversion which is a common enough human tendencies. The absolute risk is the insolvency of the borrower or the company whose share has been brought an investment. Government bonds are free from insolvency risk and their returns are also the lowest. Debentures and fixed deposit with companies are not risk free, although their returns are higher. Equity shares carry the highest risk; their returns can also be high from dividends as well as bonus, rights etc.

## **Introduction to Portfolio Management**

Portfolio management means selection of securities and constant shifting of the portfolio in the light of varying attractiveness of the constituents of the portfolio. It is a choice of selecting and revising spectrum of securities to it with the characteristics of an investor. Markowitz analysed the implications of the fact that the investors, although seeking high expected returns, generally wish to avoid risk. It is the basic of all scientific portfolio management. Although the expected return on a portfolio is directly related to the expected return on component securities, it is not possible to deduce portfolio riskness simply by knowing the riskness of individual securities. The riskness of portfolio depends upon the attributes of individual securities as well as the interrelationships among securities.

A professional, who manages other people's or institution's investment portfolio with the object of profitability, growth and risk minimization is known as a portfolio manager. He is expected to manage the investor's assets prudently and choose particular investment avenues appropriate for particular times aiming at maximization of profit. Portfolio management includes portfolio planning, selection and construction, review and evaluation of securities. The skill in portfolio management lies in achieving a sound balance between the objectives of safety, liquidity and profitability.

Timing is an important aspect of portfolio revision .ideally; investors should sell at market tops and buy at market bottoms. They should be guarded against buying at high prices and selling at low prices. Timing is a crucial factor while switching between shares and bonds. Investors may switch from bonds to shares in a bullish market and vice-versa in a bearish market.

- Portfolio management is the process of creation and maintenance of investment portfolio
- Portfolio management is a complex progress which tries to make investment activity more rewarding and less risky.

### **Major tasks involved with portfolio management**

- Taking decision about investment mix and policy
- Matching investment to objectives
- Asset allocation for individual and institution
- Balancing risk against performance