Investment portfolio management

Business, Career

A combination of several financial assets constitutes a portfolio... Finding an optimal portfolio position for an investor is the central theme of the ' Portfolio Theory'. This theory advocates that the return expected by any investor on his return is subject to the interaction of certain factors. In order to determine the correlation between the risks and returns the statistical values of market returns like the ' mean value' and ' variance' can be used. In the place of variance its square root ' standard deviation' can also be used.

Hence these two statistical values can be considered as the two basic determinants the value of the expected market return from the various investments made by the investor. These values can be ascertained by collecting data on the returns of a particular security over a fixed historical period and a statistical analysis of these historical returns will provide the expected return from the investment. ' Mean-variance portfolio theory' or ' two-parameter portfolio theory' are the other names attributed to this theory because of the usage of these statistical values in the analysis.

Under normal circumstance the investor desires to achieve a higher mean return instead of a lower mean return. On the other hand deriving a lower variance of return instead of a higher one would be the preference of the investor. (Citring Group). The expected return on a portfolio is represented by the weighted arithmetic average of the expected returns of the assets comprised in the portfolio. The standard deviation calculated on the portfolio's rate of return gives the extent of riskiness of the portfolio concerned. Efficient Portfolios

There are a number of possible combinations in which the investments can be planned and each one of them will represent a portfolio. It is possible to combine the investment opportunities of a particular investor into a number of portfolios, depending on his choice of risk taking levels. Normally the expected return from any portfolio forms the basis of arriving at the possible portfolios for investment. In any decision on the portfolio the standard deviation of the return also is considered to be a major determinant factor. The expressed indices are then plotted on a two-dimensional graph.

It is for the investor to select that portfolio in which he is expected to derive maximum utility of the investment. The investor can make this choice by following two steps: (a) demarcating the set of efficiency portfolios and (b) selection of the optimal portfolios from the selected efficient portfolios It is to be noted that the efficient frontier would most likely to be the same for all the investors as the all the investors have expectation which is homogenous in character. The task of choosing an efficient portfolio from a set of available alternative efficient portfolios is complex.

Generally the following methods are followed for the purpose of determining the efficient portfolio: • Graphical analysis method;, • Calculus analysis method; or • Quadratic programming analysis method The graphical analysis is easier to use. However the graphical analysis cannot be used because it carries a disadvantage. The disadvantage is that this method of analysis can make only a maximum of three securities for analysis. On the other hand the mathematical analysis method is considered superior. This is because it can

hold control for an n-dimensional space where more number of securities than the graphical analysis method.

Calculus method also can analyze portfolios with more combinations of securities than the other methods. Of all the analysis models the quadratic programming is considered as the better method to analyze the portfolios. The reason being the quadratic programming can also handle more number of securities without difficulty. At the same time this method is capable of handling the inequalities in the portfolios as well. Hence the quadratic system is considered by the analysts as the most useful approach for all analysis of the efficiency of the portfolios. (Citrin Group)