

Modern approach

The traditional approach is a comprehensive financial plan for the individual. It takes into account the individual needs such as housing, life insurance and pension plans. But these types of financial planning approaches are not done in the Markowitz approach. Markowitz gives more attention to the process of selecting the portfolio. His planning can be applied more in the selection of common stocks portfolio than the bond portfolio. The stocks are not selected on the basis of need for income or appreciation. But the selection is based on the risk and return analysis. Return includes the market return and dividend. The investor needs return and it may be either in the form of market return or dividend. They are assumed to be indifferent towards the form of return.

In the modern approach the final step is asset allocation process that is to choose the portfolio that meets his requirement of the investor. The risk i.e. who are willing to accept a higher profitability of risk for getting the expected return would choose high risk portfolio. Investor with lower tolerance for risk would choose low level risk portfolio. The risk neutral would choose the medium level risk portfolio.

Managing the portfolio

After establishing the asset allocation the investor has to decide how to manage the portfolio over time. He can adopt passive approach or active approach towards the management of the portfolio. In the passive approach the investor would maintain the percentage allocation for asset classes and keep the security holdings within its place over the established holding period. In the active approach the investor continuously assess the risk and return of the securities within the asset classes and changes them accordingly. He would be studying the risks 1) market related 2) group related 3) security specific and changes the components of the portfolio to suit his objectives.

Markowitz model

Harry Markowitz opened new vistas to modern portfolio section by publishing an article in the Journal of finance in March 1952. His publication indicated the importance of correlation among the different stocks returns in the construction of stock portfolio. Markowitz also showed that for a given level of expected return in a group of securities, one security dominates the other. To find out this, the knowledge of the correlation coefficients between all possible securities combinations is required.

After the publication of his paper, numerous investment firms and portfolio managers developed Markowitz algorithms” to minimize portfolio variance i.e. risk. Even today the term Markowitz diversification is used to refer to the portfolio construction accomplished with the help of security covariance.

Simple diversification

Portfolio risk can be reduced by the simplest kind of diversification. Portfolio means the group of assets an investor owns. The assets may vary from stocks to different types of bonds. Some times the profitability may consist of securities of different industries. When different assets are added to the portfolio, the total risk tends to decrease. In the case of common stocks, diversification reduces the unsystematic risk or unique risk. Analysts opine that if 15 stocks are added in a portfolio of the investor, the unsystematic risk can be reduced to zero. But at the same time if the number exceeds 15, additional risk reduction cannot be gained. But diversification cannot reduce systematic or undiversifiable risk.

Total risk of the portfolio consists of systematic and unsystematic risk and this total risk is measured by the variance of the rates of returns over time. Many studies have shown that the systematic risk forms one quarter of total risk.

The simple random diversification reduces the total risk. The reason behind that the unsystematic price fluctuations are not correlated with the market's systematic fluctuations.

The standard deviation was calculated for each portfolio and plotted. As the portfolio size increases, the total risk line starts declining. It flattens out after a certain point. Beyond that limit, risk cannot be reduced. This indicates that spreading out the assets beyond certain level cannot be expected to reduce the portfolio's total risk below the level of undiversifiable risk.

Problems of vast diversification

Spreading the investment on too many assets will give rise to problems such as purchase of poor performers, information inadequacy, high research cost and transaction cost.

Purchase of poor performers

While buying numerous stocks, sometimes the investor may also buy stocks that will not yield adequate return.

Information inadequacy

If there are too many securities in a portfolio, it is difficult for the portfolio manager to get information about their individual performance. The portfolio manager has to be in touch with the details regarding the individual

company performance. To get all the information simultaneously is quite difficult.

High research cost

If a large number of stocks are included, before the inclusion itself the returns and risk of the individual stock have to be analysed. Towards this end, lot of information has to be gathered and kept in store and these procedures involve high cost.

High transaction cost

When small quantities of stocks are purchased frequently, the investor has to incur higher transaction cost than the purchase of large blocks at less.