

## **Realization Of Investors On Portfolio Construction: An Emphasis On Markowitz's Modern Portfolio Theory**

**Shaswati T**  
**Assistant Professor on Contract**  
**Providence Women's College**  
**Calicut, Kerala**

### **ABSTRACT**

Security investment is a complex task which requires a careful examination of all available financial instruments which gives the investors a better return. Investment in financial securities involves certain degree of risk depending on many crucial factors like the change in economic conditions, industry specific components and the corporate performance. An investor can directly make investment in a single security or can go for investment in a group of securities. When compared with investment in a group of securities, single security investment is riskier as the entire money will be lost in case of any loss occurring to the company. Here arises the relevance of portfolio construction. Portfolio gives the investor an opportunity to invest in a group of securities and will help to reduce the degree of risk through diversification strategy. Portfolio construction and management will allow the investor to accomplish the basic objective of investment more efficiently. Investment objectives can be stable return, liquidity of investment, tax exemptions, Capital appreciation etc. Choice of securities in a portfolio depends upon the risk tolerance of each investor. The risk involved in each security is different and it can be reduced through creation of a portfolio.

Keywords: Diversification, Markowitz model, Portfolio construction, Return, Risk.

### **INTRODUCTION**

The main purpose behind construction of a portfolio is to reduce the risk proportion and increase the collective returns from each security. Some investors create a portfolio to take advantage of tax exemptions, marketability and to generate a good return. The first step in portfolio construction is to measure the risk appetite of investors. Certain category of investors is ready to take up risk but some are risk-averse. After measuring the level of risk, investor can move to the process of asset allocation. Asset allocation is the task of choosing securities by comparing the financial instruments available in the market. Investors has wide class of choice in financial assets. There are traditional and alternative assets. Traditional assets are stocks, bonds, cash and cash equivalents. On the other hand, alternative assets include commodities, insurance products, derivatives etc. While selecting securities proper analysis about the company, industry and economy should be made to avoid loss of money. There are different types of portfolios like patient portfolio, aggressive portfolio, conservative portfolio, efficient portfolio etc. These classifications are done to suit different types of investors based on their risk potential. Selection of portfolio can only be done by analyzing the equity market, type of diversification strategy, knowledge and skill of investor, market regulatory issues and the amount of fund that investor is willing to invest. Fundamental analysis or technical analysis can be adopted while constructing a portfolio. Fundamental analysis studies the various factors relating to the economy, industry and company from which investor choose the security and technical analysis deals with the price movements represented through charts and patterns. Investors can follow an active or passive investment strategy. In Active investment strategy, frequent changes will be made in the portfolio based on market fluctuations whereas in passive investment strategy only rare changes will be made if necessary otherwise investors hold it until maturity. There are two

methods that investor can use to construct a portfolio which is traditional method and modern method. Under traditional portfolio method investor must analyze the constraints, determine the investment objective, select asset for portfolio, assess risk and return and then diversify by purchasing securities from different sectors. Modern portfolio method also has the same pattern but it includes the use of various statistical measures for risk-return analysis and based on the result portfolio is constructed. This research paper is an attempt to find out the realization that investors have towards portfolio construction by drawing attention to Markowitz's Modern Portfolio Theory.

## **MARKOWITZ PORTFOLIO THEORY**

Dr. Harry M Markowitz propounded this theory in the year 1952. This theory emphasizes on creating an efficient portfolio which will help the investor to reduce risk up to a given level with high returns. Markowitz model is also known as Modern portfolio theory or Mean-variance analysis. This model portrays the measures that can be used effectively to know the risk-return characteristics of each security. Markowitz uses various statistical methods to select asset that will produce an efficient portfolio. This theory is applicable based on certain assumptions which is framed by Harry Markowitz. The core element of this model is diversification strategy that will balance the total risk in the portfolio. Through diversification investor get an opportunity to select different financial instruments from different industries. While diversifying portfolio investor should analyze the systematic risk and unsystematic risk of individual security. Systematic risk is the common market risk that affects all securities equally and it cannot be reduced through diversification but, unsystematic risk includes the factors that specifically affect a single asset and it can be reduced through diversification. Markowitz model is one of the important portfolio selection models where the term risk is used synonymously with volatility. Volatility represents the uncertainty in the value of a security. If a security has more volatility then it depicts that there is more risk involved. Modern method of portfolio construction uses statistical measures like standard deviation, variance, covariance and correlation to measure the exact risk of portfolio. These measures study the inter-relationship between each security that make up the portfolio. The key concept of Markowitz model is efficient frontier. Efficient frontier is the best combination of securities that will give higher return at a given level of risk or minimum risk for a given level of return. It is plotted on a risk return graph and a line is drawn to join all the corners of a portfolio. The line drawn by connecting all portfolios is the efficient frontier.

### **Assumptions of Markowitz portfolio theory**

- Investors are rational.
- Investors have free access to fair and correct information on the return and risk.
- Market is efficient and absorb the information quickly and perfectly.
- Investors are risk averse and try to minimize risk and maximize return.
- Investors choose higher returns to lower returns for a given level of risk.
- Investors base decision on expected returns and variance or standard deviation of these returns from the mean.

Markowitz model uses the mean variance criterion for construction of portfolio and analysis the risk and return of individual security and then the risk-return characteristics of group of securities to find out whether it will reduce the overall risk of portfolio. This model includes the principle of risk, principle of diversification and principle of trade-off between risk and return. Risk is the change in security price that leads to decrease in expected return and the fluctuations in returns is properly explained in Markowitz model through use of standard deviation and variance. This model also uses correlation method to study the inter-relationship among securities in portfolio. If securities are negatively correlated then the portfolio help to reduce the risk considerably and if there is positive correlation then there is more risk. Thus, Harry Markowitz's Modern portfolio theory specifies that portfolio construction will provide help in reducing risk if there is negative correlation between the securities.

**OBJECTIVES**

1. To study about the awareness level of investors towards portfolio construction.
2. To know the method followed in constructing portfolio.
3. To study the awareness about Markowitz Portfolio Theory.
4. To identify the problems faced during portfolio construction.

**SCOPE AND SIGNIFICANCE**

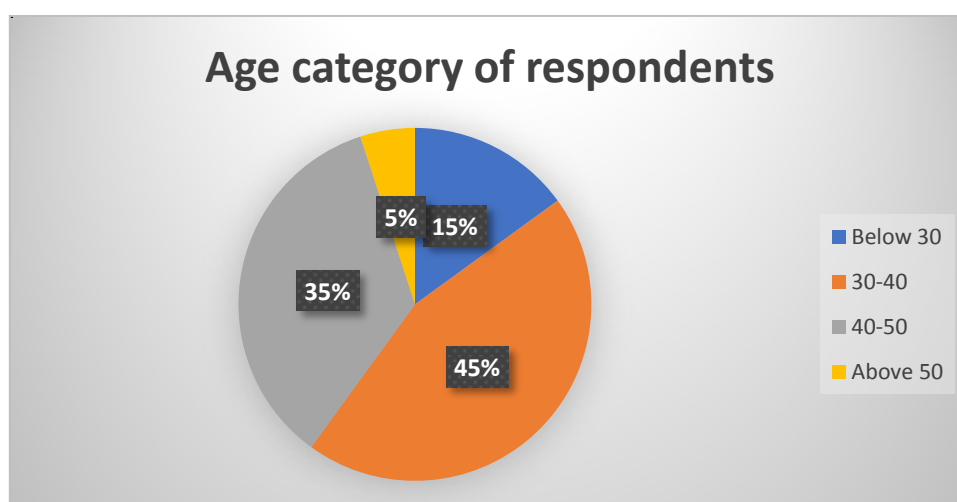
This study is done to understand whether investor follow traditional or modern portfolio construction method and do they have proper knowledge in creating a portfolio. This study aims to analyze the awareness that investors have while investing in a portfolio and the problem that they face in framing a portfolio. Portfolio construction and management is a complex task which requires adequate knowledge about the security market. This research attempts to bring forward one of the most acceptable portfolio selection models that will best suit a risk averse investor. So, the main focus of this research study is to determine the importance of constructing a portfolio by following Markowitz portfolio theory.

**RESEARCH METHODOLOGY**

This research study is descriptive in nature and the sample size of the study was 100. Convenient sampling is used for selecting the respondents from Calicut district, Kerala. Both primary and secondary sources were used for data collection. Primary data was collected through questionnaire to know the awareness about Markowitz model while making investment. Secondary data collection was done through internet, books and websites. Data is analyzed through percentage analysis and charts.

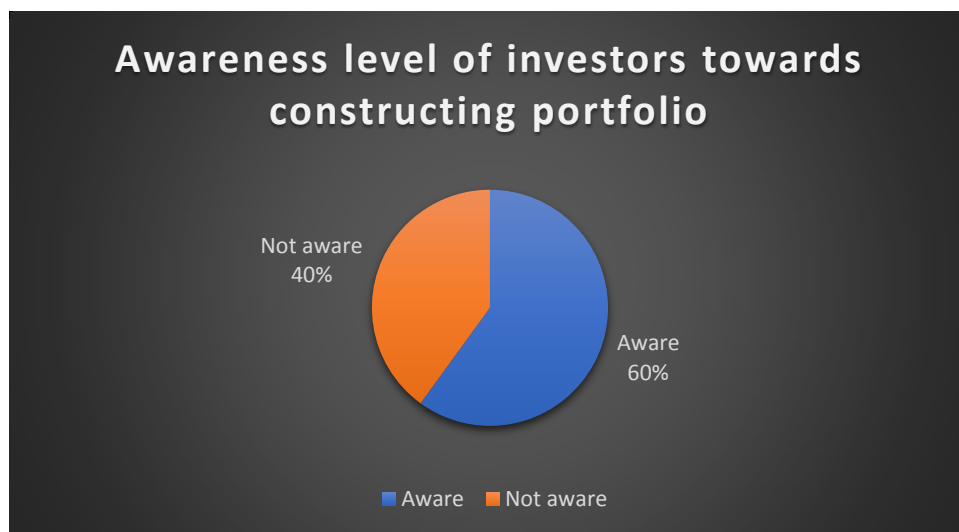
**DATA ANALYSIS AND INTERPRETATION**

**Figure 1 showing the age wise classification of respondents**



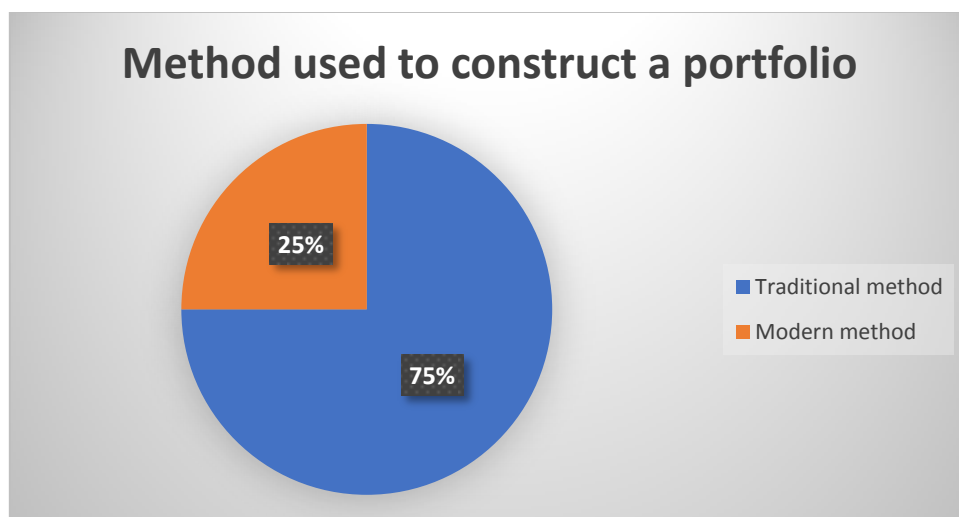
**Interpretation:** Majority of respondents fall between the age of 30-40, 35% of respondents between the age 40-50, 15% below 30 and 5% above the age 50. This shows that the majority of respondents under study are youth.

**Figure 2 showing awareness towards portfolio construction**



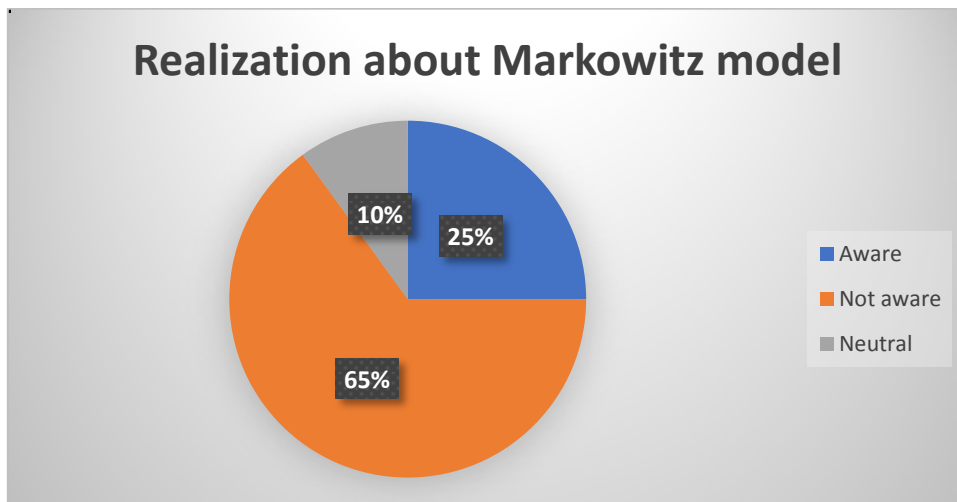
**Interpretation:** More than 60% of respondents are aware about the procedure to create a portfolio while investing in security market and 40% of the respondents are not much aware about constructing portfolio.

**Figure 3 showing method used to construct portfolio**



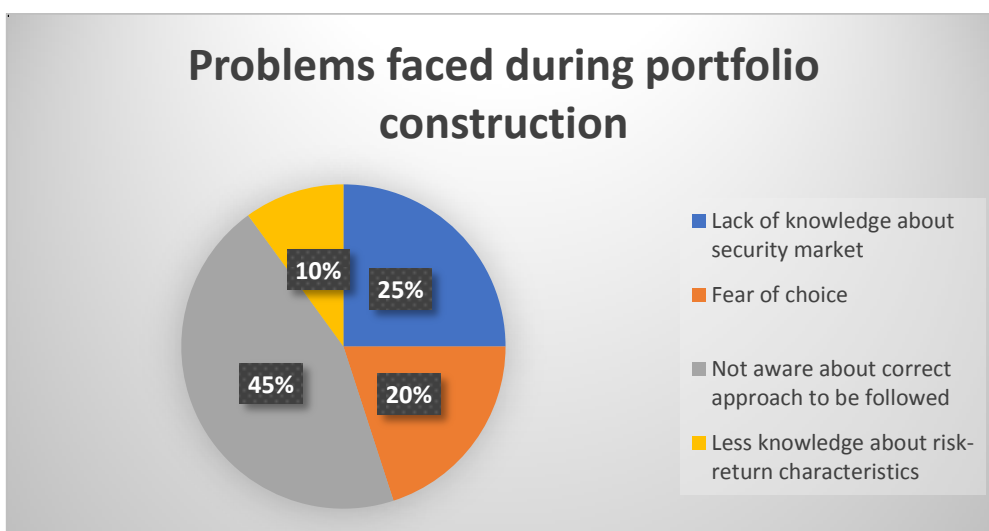
**Interpretation:** Almost 75% of the respondents follow traditional method and 25% of respondents follow modern method which is also known as Markowitz model.

**Figure 4 showing realization of investors about Markowitz model**



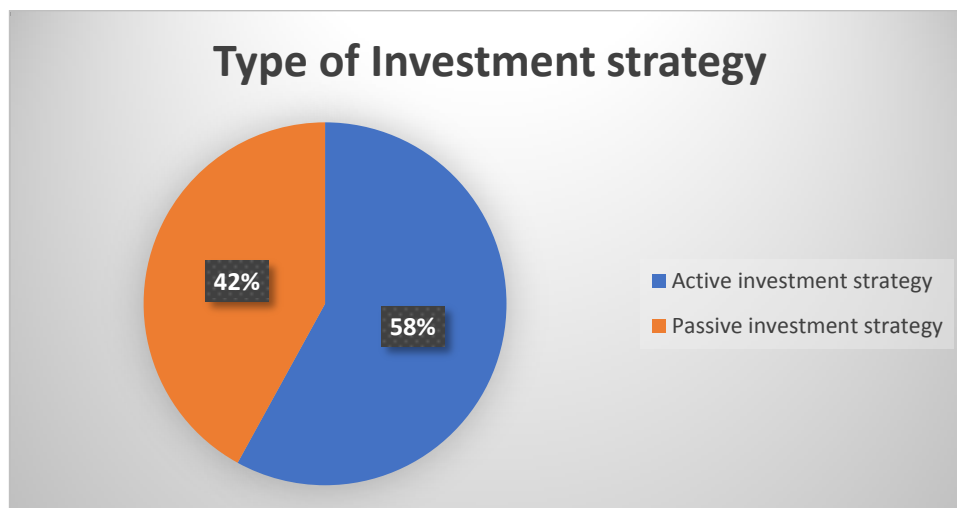
**Interpretation:** More than 65% of respondents are not aware about Markowitz portfolio model, 25% of the respondents are aware about Markowitz model and is following this method while constructing the portfolio and 10% has chosen neutral option.

**Figure 5 showing problem faced while constructing portfolio**



**Interpretation:** Majority of respondents are not aware about the correct method to be followed while constructing a portfolio, 25% of respondents feels that lack of knowledge is the problem, 20% selected the option fear of choice as a problem during construction of portfolio and 10% have less awareness about risk-return characteristics of securities which is an obstacle in creating a portfolio.

**Figure 6 showing the type of investment strategy adopted**



**Interpretation:** Almost 58% of respondents have adopted active investment strategy which means they are revising the portfolio alternatively based on fluctuations in price and 42% follow passive strategy which depicts that they hold their securities until maturity without considering the price changes in the security market.

**FINDINGS**

- ❖ Most of the respondents under study belongs to the age group of 30-40
- ❖ Majority of the respondents are aware about construction of portfolio. They have conducted proper study about the factors to be considered during portfolio creation.
- ❖ Active investment strategy is the pattern followed by many respondents.
- ❖ Almost 75% of respondents are using the traditional method in constructing portfolio which shows the lack of knowledge they have about Markowitz model.
- ❖ Almost 65% of the respondents does not have awareness about Markowitz portfolio theory, this clearly shows that majority of respondents are not using modern portfolio method in creating an efficient portfolio to minimize risk component.
- ❖ Majority of respondents feels that less awareness about the correct approach to be followed is the major obstacle in constructing and managing a portfolio.

## CONCLUSION

Earlier portfolio construction was done on the bases of intuitions of investors but now there are wide usage of portfolio selection models like Markowitz model, Sharpe single index model, capital asset pricing model etc. which are used to analyze the risk-return characteristics of each security within a portfolio. Traditional method or Modern method can be used to create a portfolio. Traditional portfolio method measures the risk and return of securities and does not study the correlation between securities but modern portfolio theory studies the correlation between each security in a portfolio by applying diversification strategy. This study is concerned with identify the acceptance and relevance that Markowitz portfolio theory has in portfolio construction. Markowitz model also known as Modern portfolio theory emphasize on the creation of an efficient portfolio which maximizes return at a given level of risk. By following this theory investor can optimize his portfolio by selecting the best portfolio out of the set of all portfolios. Respondents under the study have good knowledge about constructing a portfolio. This research study reveals that majority of respondents under study does not have a proper knowledge and awareness about the Modern method of portfolio construction which is also called Markowitz portfolio theory.

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