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### Stock Investment Analysis Skills And Understanding Efficient Portfolio

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#### Abstract

Investment is the placement of some funds at this time with the hope of obtaining future profits. The fundamental thing in the investment decision process is to understand the relationship between the expected rate of return and the risk of an investment. The uncertainty of risk makes investors take a strategy to form a portfolio. Portfolio is a combination or combination or a set of assets, both in the form of real assets and financial assets owned by investors. Investors always want to maximise the expected return with a certain level of risk that they are willing to bear, or look for a portfolio that offers the lowest risk with a certain level of return in forming a portfolio. The characteristics of such a portfolio are referred to as an efficient portfolio. An investor needs to understand the meaning of investment, investment objectives, investment risk, and investment return. This study aims to introduce the Markowitz model in analysing the expected rate of return and its risks. The research method used in writing this article uses qualitative research with literature studies. From the discussion, it can be concluded that an investment portfolio can consist of several classes of the same asset or the same asset but consists of several different names. Investors can find out what stocks can be included in the optimal portfolio and the proportion of funds for each of these stocks formed by the Markowitz model

Keywords: Stock Investment, Efficient Portfolio, Risk

## **INTRODUCTION**

Nowadays, investment is starting to be familiar to our ears. The role of the capital market from year to year is an attractive vehicle for the business world. The capital market can be used as a means to offer a variety of securities for investors to invest in. But have we really understood the investment itself? For this reason, we need to understand the definition of investment, investment objectives, investment risks, and investment returns. This understanding is important so that we do not experience huge losses when investing.

The capital market itself is a place for investors to place their funds through various investment instruments such as stocks, bonds, mutual funds, etc. and provides another party for the public to invest. Investment is the placement of a number of funds at this time with the hope of obtaining future profits (Abdul Halim, 2005: 4). According to Tandelilin (2007: 5) that the fundamental thing in the investment decision process is understanding the relationship between the expected return and risk of an investment. The uncertainty of risk makes investors take a strategy to form a portfolio.

Portfolio is a combination or combination or a set of assets, both in the form of real assets and financial assets owned by investors. Investors always want to maximize the expected return with a certain level of risk they are willing to bear, or look for a portfolio that offers the lowest risk with a certain level of return in portfolio formation. The characteristics of such a portfolio are referred to as an efficient portfolio (Tandelilin, 2007: 74).

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Meanwhile, the portfolio that an investor chooses from the many choices that exist in the collection of efficient portfolios is the optimal portfolio.Markowitz (1952) developed a portfolio formation that seeks to minimize risk and ensure that the return will be more than the amount set by the decision maker. Variance is used as a measure of risk in the Markowitz model. The Markowitz model is a single objective model where the Markowitz model uses a quadratic programming model. The quadratic Markowitz model is not easily solved by some practitioners. Sharpe (1963) introduced a new model for portfolio formation problems. Sharpe introduced systematic risk whichmeasures the sensitivity of stock returns to market returns.

### **RESEARCH METHODS**

The research method used in writing this article uses qualititative research. Data collection uses literature studies and the type of data used is secondary data, in the form of previous research results by analyzing several journals with the theme of stock investment. The literature data is collected and then analyzed to hone skills in analyzing stocks.

## RESULTS AND DISCUSSION

### **Definition of Actual Return and Expected Return**

Return is the rate of profit enjoyed by investors on an investment made (Ang, 1997). Husnan (1994) also states that stock returns are the results obtained from an investment. Investors must really realize that in addition to obtaining profits, it is possible that they will experience losses. The profit or loss is strongly influenced by the investor's ability to analyze the state of the stock price is a momentary assessment that is influenced by many factors including the condition (performance) of the company, external constraints, the strength of supply and demand for shares in the market, and the ability of investors to analyze stock investment.

Returns can be realized returns that have already occurred or expected returns that have not yet occurred but are expected in the future. Realized return is the return that has occurred, calculated based on historical data. Realized return is important because it is used as one of the performance measures of the company. This historical return is useful as a basis for determining future return expectations and risk (Ang, 1997). The concept of risk and return has a very large role where investor behavior is often based on this concept. Husnan (1998) in Martono (2009) reveals a financial theory that discusses the analysis of investments that have high risk, investors require an increasingly high level of return as well.

Expected return is a return that has not yet occurred but is expected in the future. As rational individuals, investors will consider the expected return and the amount of risk that must be borne as a logical consequence of the decisions that have been taken.

## **Factors that Affect Return in Investment**

When investing, there must be various factors that will affect the amount of return that will be obtained. Here are some factors that affect the return received by investors according to Tandelilin (2010: 102).

### a. Interest rate

Rising interest rates will reduce the current value of the investment from the return that

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will be obtained in the future. This will also reduce the stock price in the stock market.

b. Inflation

High inflation will increase the amount of capital required to invest as prices rise.

c. Exchange rate

The exchange rate involves the strengthening and weakening of a country's currency against foreign currencies. Where, the stronger the currency, the greater the investment return, and vice versa.

d. Liquidity Risk

Liquidity risk relates to the secondary market in stock trading. Thus, investment assets havehigh liquidity if they are sold or bought quickly without any price changes.

e. Market risk

If the capital market conditions are high, the return that will be obtained is also higher. Meanwhile, when the capital market conditions decrease, the returns obtained will also decrease.

# How to Calculate Return & CalculationExample

Based on the type, how to calculate stock returns can be divided into 2, namely the realized stock return formula and the expected stock return formula. The way to calculate stock returns is as follows.

### a. Realized Stock Return

Pi,t-Pi,t-1 Ri,t = Pi,t-1 Description:

Ri,t = stock return i at time t Pi,t = stock price i in period t

Pi,t-1 = stock price i in period t-1

## b. Stock Returns in the Form of Capital Gain and Capital Loss

E(Rit) = Rmt

Description:

E(Rit) = expected stock returns on day tRmt = market rate of return in period t

## c. Stock Returns in the Form of Capital Gain and Capital Loss

Stock return = (selling price - buying price) + dividend

A return is considered a profit if it is positive and a loss if it is negative.

The higher the return, the better your investment is performing. Return can be calculated by yourself using the following formula:

(Current Price-Purchase Price) x Number of Units You Own.

For example, you get 100 mutual fund units at Rp110,000 each. When your unit price later becomes Rp125,000, then, based on the formula above, the return you get is:

 $(Rp125,000-Rp110,000) \times 100 = Rp1,500,000$ 

Now, what happens if you get 100 mutual fundunits at Rp110,000 each, but then your unit price becomes Rp95,000?

Using the same formula, the return you get is:  $(Rp95,000-Rp110,000) \times 100 = -Rp1,500,000$ 

### **Risks of Common Stock**

Ordinary shares or common stock are securities as proof of ownership of a company. Holders of common stock have voting rights at the General Meeting of Shareholders (GMS). Common stockholders have the right to dividends. However, in the event of a company

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liquidation, common stockholders will be the last to receive assets, if any, after assets are first divided among the company's creditors and preferred stockholders. Due to the greater risk characteristic of common stocks, the return on these instruments is usually higher. Ordinary shares have the advantage of being tradable and there is no time period or maturity for purchasing shares, and it allows diversification. the risks of ordinary shares, namely: Investors can lose all their capital, if the issuer they invested in goes bankrupt. Not receiving dividends,

### **Characteristics of Common Stock**

Some of the characteristics of common stock Fahmi (2015: 80) are as follows:

if the company concerned does not declare dividend distribution.

- a. Availability. This aspect is a common characteristic for investors to own a share of the company.
- b. Voting rights. Shares generally come with member voting rights for the board of directors and certain events, including acquisitions, stock splits, or mergers.

## Markowitz Approach Theory (MeanVarience Theory)

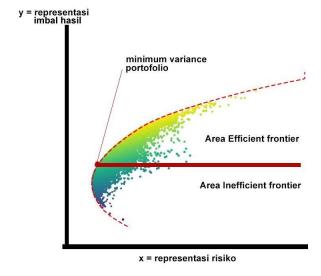
In 1952, a new idea in investing was proposed by Harry Markowitz. Markowitz said that if risk is considered a problem that is not favored by investors. Markowitz argued that the best portfolio is the one that is managed in the most optimal way, namely by considering in every trade off (decisions on two or more things, sacrificing / losing an aspect for certain reasons to obtain another aspect with different qualities as a choice taken) between risk and returns that will be obtained later.

This model will generate a portfolio through a mean-variance based process. Mean is the expected return which is mostly calculated by averaging and Variance is the risk measure used. The Markowitz model portfolio theory teaches investing by breaking up the invested funds called then putting them on different paths, instead of focusing on one path only or called diversification. The separate placement of funds is intended to reduce the risks that will arise in the future which gave birth to the Efficient Frontier.

## **Locus of the Efficient Portfolio Set(Markowitz Efficient Frontier)**

Efficient frontier is a curve or graph that describes a set of portfolios that maximizes the expected return at each level of each level of risk of the portfolio.

### Chart explanation:



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Y-axis: represents the return.

X-axis: represents risk

Minimum variance frontier: the part that divides between efficient and inefficient portfolios.

To apply this formula, there are several thingsthat must be considered, namely:

- a. The weight of each asset in the portfolio.
- b. The risk weights of individual securities are calculated using the proportion of funds in the portfolio.
- c. Weighted co-movement between returns i.e. return covariance weighted using the proportion of the funds in each security.
- d. Covariance between 2 assets/securities is a data measure that aims to see the relationship between dimensions. This covariance shows the extent to which two assets or securities in a portfolio tend to move together.
- e. Variance, which is a representation of the ratios of each asset.

#### **Journal Review**

The following is a journal written by Ahmad Khotim, et al. made in 2014 entitled "Analysis of Optimal Portfolio Formation Using Single Index Models and *Stochastic Dominance*". Which aims to determine the composition of stocks that make up the optimal portfolio, determine the level of portfolio return and find out if there is a difference in the level of portfolio return formed using two analysis models.

The type of research used by researchers in this study is descriptive with a quantitative approach descriptive research is "Research conducted to provide a more detailed description of

The advantages of this journal are

- 1. The author is able to explain well each
- 2. The author provides a clear solution by issuing numerical data and proof analysis in the discussion.
- 3. Each data and information is presented in a systematic and informative manner, which is very helpful for readers to understand the content and purpose of journal writing.

The conclusion of this journal is that the analysis of optimal portfolio formation with a single index model is able to produce 6 candidate portfolio stocks from 18 Sri-Kehati Index stocks in the research period 2010 to 2013. Stock candidates are stocks that have an ERB value > Ci (where Ci = 0.013).

### **CONCLUSION**

From the discussion of the paper above, we can conclude that an investment portfolio can consist of several classes of the same asset or the same asset but consists of several different names. Optimal portfolio formation is done sothat investors get a certain return with the smallest risk. The goal is to find out what stocks can be included in the optimal portfolio and the proportion of funds for each of these stocks formed by the Markowitz model. Portfolio theory states that risk and return should be considered with the assumption that a formal framework is available to measure both in portfolio formation. Thus the paper that we can convey, we realize that there are still many shortcomings in this

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writing and paper content. Therefore, we expect constructive criticism and suggestions for the perfection of our next better paper writing. Hopefully this paper is useful for us, Ameen.

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