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Single Index Model as Feasible Choice for Optimal Portfolio Formation

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Abstract

In investing, investors are expected to have a portfolio or a combination of investment types owned by someone to obtain good results in determining the portfolio. There are many choices of investment combinations even unlimited. The combination of investments owned by investors must be able to provide profits and risks according to investors' preferences so that investors need to form an optimal portfolio. Investors are often confused about determining the optimal portfolio before investing. The single index model is a way that investors can use to see which investments can produce optimal portfolios because this model can calculate the returns and risks that can be obtained based on market movements.

Keywords: investor, optimal portfolio, profit, risk, single index model.

INTRODUCTION

Investment is an activity of investing money or excess capital owned by someone to get profits in the future, investment activities certainly have a positive impact on many people and are an alternative that someone uses to take advantage of the excess capital or money they have besides saving at the bank. The advantage of investing is that there is the possibility of getting a profit that can later be obtained by someone from profit sharing or commonly called dividends, or getting profits from the result of the price difference when making an investment and the selling price of the investment at a certain time.

But it cannot be denied that besides being able to generate profits for someone, investment also provides a risk of loss on the investment made. The risk of an investment can be caused by an investment instrument that fails or loses because the

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selling price has decreased compared to the purchase price. What's more, there are currently many modes of fraud under the guise of investment.

In investing, a principle is commonly used: not investing in just one instrument but dividing the portion of the capital we have into several investment instruments. The goal is to minimize the risks that will be faced. Because each instrument has different advantages and risks. The result of the combination of each selected investment instrument is what is called a Portfolio.

A good portfolio contains a combination of investment instruments which can later have a positive impact with the best level of profit and risk for investors because each investor has different profit and risk preferences, so a portfolio is needed that contains a combination of investments that are by the wishes of the investor. form The Optimal Portfolio,

The optimal portfolio is the portfolio with the best combination of expected return and risk (Tandelilin, 2010: 157; Hartono, 2017: 387). Many investors do not know how to determine the optimal portfolio that will be chosen as part of their investment. This analysis tries to see how the Single Index Model which assumes that investment profits and risks are related to market prices will be used to determine the selection of optimal investments or portfolios.

Formulation of the problem

How to determine the Optimal Portfolio using the Single Index Model?

Research Purpose

To see whether the Single Index Model can help and be used by investors in Forming the Optimal Portfolio.

Research Benefit

The purpose of this writing can be a lesson for the reader, by looking at how the single index model is used, it is hoped that investors will have a deeper understanding to form optimal portfolios in the future.

Writers it is expected to add insight and knowledge related to investment and be able to implement investment materials that have been obtained in lecture materials to be used and directly involved in making investments.

RESEARCH METHODOLOGY

Types of research

This type of research in the article uses descriptive research, namely the author uses data collection methods and is processed to produce a basic description of the

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phenomenon being studied, namely the formation of an optimal portfolio with a single index model. after the data is described, the writer identifies the study.

Data source

Secondary data sources are data obtained from literature sources, namely from scientific and journals

Data collection technique

The deep data collection technique is a literature study, in which the writer collects literature that is appropriate to the problems faced and draws conclusions from the resulting studies.

Data analysis technique

The data analysis technique is factor analysis, by carrying out a descriptive description of and determining the relationship of the independent variables in describing the dependent variable, the writer describes how to form an Optimal Portfolio with the Single Index Model.

DISCUSSION

Investation

Investment is an investment or money that someone makes with the hope of getting a profit in the future, investment is one of the financial instruments that many people use to take advantage of the excess capital they have. Some of the advantages of investing besides getting profits are that investment can be an alternative to limiting currency depreciation or inflation because by investing the value of money that is owned will produce.

Profit

Profits are returns derived from investments, these profits are obtained in the future, which means that time is needed to obtain profits, profits in investment are obtained from the results of profits being distributed or the difference in results from the sales value minus the purchase value. If the expected profit is large by investors, investors must dare to invest in investment instruments that also offer high levels of profit. But keep in mind that investments with high returns are often at risk of losses for investors.

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Risk

Risk is a failure in an investment that must be borne when investing because there is a possibility of failure in investing. The risk of each investment is different. the greater the expected profit, the greater the risk that investors must be prepared to bear. Because of that big risks are often avoided by investors. Risk is something that cannot be avoided in any investment, but the risk can be minimized in various ways depending on the investor. Therefore, there is a choice of investment in the form of a portfolio to minimize the risks that threaten it.

Optimal Portfolio

An optimal portfolio is a portfolio with the best combination of expected return and risk for an investor. A portfolio is a diversification option for investors to combine investments made to minimize risk. By forming a portfolio, it is hoped that the expectation of getting a profit will be greater with a small risk. Because the purpose of forming a portfolio is to choose the assets to be invested from the many available assets with the hope of profit at a certain level of risk that the investor prefers, in other words, the investor can bear.

Single Index Model

This model states that investment prices will move simultaneously with prices experienced by the market, for example, if the price of shares in the market rises, the same thing tends to rise in most stocks, and vice versa if the market experiences a price decline, most stocks are also experiencing a price decline. , The Single Index Model has characteristics that link the calculation of returns for each asset to the market index, that securities are related to each other if they have the same response to changes in the market.

Optimal Portfolio Formation with Single Index Model

A portfolio with a single index model can be formed by assessing several stocks to be selected into the optimal portfolio by comparing the excess return to beta (ERB) with the cut-off point as the limit. ERB is the difference between expected profit and risk-free asset profit.

E(Ri) = αi +βi . RM

Re: stock asset return- I
αi: stock asset variable i is independent of market performance
βi: change in asset return resulting from changes in market returns
RM: return in the market

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to determine which stocks can be included in the optimal portfolio. ERB Value :

Erbi $=\frac{E\,(Ri)-RBR}{\beta i}$

ERBs are sorted from the largest to the smallest value. The largest ERB securities are the right choice to include in the optimal portfolio. ERB shows the relationship between profit level and risk profile. The optimal portfolio has a high ERB ratio value. Because of that, it is necessary to have a cut-off point limit for the value of ERB which is said to be good or not.

CONCLUSION

Investment is an activity that expects profit, but with risks that allow losses for investors. So it is necessary to have diversification to minimize investment risk by forming a Portfolio or a combination of investment assets that someone will carry out according to investor preferences to form an optimal portfolio.To determine an optimal portfolio, a calculation model is needed, the single index model can be used to form an optimal portfolio because this model will calculate the value of several stocks to be selected for the portfolio by comparing the ratio between excess returns (the difference between expected returns and asset returns). Risk-free) with beta. and cut-off point limits.The optimal portfolio is expected to be able to provide a positive outlook for investors before investing in an asset, it is necessary to diversify the capital assets to be invested, to achieve the expected profit by minimizing the risk sharing that will be borne

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