

LEGAL DIVERSIFICATION AS A STRATEGY TO REDUCE INVESTMENT RATIOS

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ABSTRACT

Everyone who invests will want to get optimal profits with a growing capital value, whether using long-term investments or short-term investment products. Therefore, a strategy is needed in making investments. One of them is by investment diversification. Investment diversification is a widely accepted strategy for reducing investment risk. In analysing the portfolio, continuous analysis is needed in order to obtain relevant information, so that the target of portfolio formation through diversification provides optimal results. At the time when the traditional portfolio was recognised, the simple diversification of investments was the commonly used strategy, however, due to its inability to recognise the correlation between returns on different investments, simple diversification was replaced with efficient diversification. This study is aimed at conducting a comparative analysis between the simple and efficient diversification of investments, and to determine the combination of expected return and LQ-45 stock risk in order to select investments in Indonesia Stock Exchange through the establishment of an optimum portfolio.

Keywords: *expected return risk, simple diversification, efficient diversification*

INTRODUCTION

Economic reality undoubtedly confirms the linkage and correlation between development and risk as a basic postulate of modern financial theory. Every investor, in addition to forecasting the future, seeks to identify and assess the risk of a particular investment alternative. Rationally, investors must expect optimal returns from the capital invested, be it long-term investment products or short-term investments. This, the achievement of expected returns, is the main driver of investment activities.

In stocks, risk is divided into two, namely systematic risk and unsystematic risk. Systematic risk is often referred to as market risk, general risk. Systematic risks are generally systematic in nature and difficult to avoid. Examples of systematic risk are rising interest rates,

rising inflation, and high market volatility. Non-systematic risk is often referred to as specific risk. Non-systematic risks can generally be managed using portfolios. An example is mutual funds. Mutual funds generally consist of several types of stocks, bonds or other financial products.

According to Markowitz (1999), a person who knows future returns with certainty will invest in only one security, the one with the highest future returns. However, this assumption ignores risk and simplifies the investment process. Investors today do not concentrate their wealth in a single security, they invest their wealth in different types of securities. In finance, this is an investment portfolio, which is a collection of different types of financial instruments.

Diversification is an effective strategy to reduce investment risk. By diversifying, if the performance of a stock in the portfolio is poor, it will be helped by the performance of other stocks that are good. Portfolio theory emphasises on trying to find the Optimal Investment combination that provides maximum rates of return at a certain level of risk. The expected rate of return on a portfolio is the weighted average rate of return of the various financial assets in the portfolio.

RESULTS OF RESEARCH AND DISCUSSION

The general concept of portfolio theory is that by combining different assets, one can achieve better results than simply investing funds in a single asset. The term "Don't put all your eggs in one basket" has been around for centuries, but investors are used to building their portfolios without considering the degree of correlation between the returns of different investment assets. Since Harry Markowitz (1952) proposed modern portfolio theory, investment risk can be minimised through the formation of an efficient portfolio, so that the risk is lower than the risk of each investment instrument that makes up the portfolio. Harry Markowitz (1952) also suggested that we should diversify across different industries.

This diversification can minimise risk at a certain level of return or in other words it is impossible to formulate a portfolio composition that produces maximum return with minimum risk. Given that investment contains risk or uncertainty, so investors do not know with certainty the return they will get. Investors can only estimate how much return is expected on their investment, and how far the actual results will deviate from the expected results. "This means

that investment in the capital market cannot be separated from the calculation of the expected return with the calculation of the expected return," he said. risk that must be accepted". (Husnan, 2001). Risk in this context is measured by how far the return received deviates from the expected return.

Unsystematic risk can be eliminated by efficient diversification, while total investment risk can be brought down to the level of systematic risk. In the case of efficient national diversification, the lower limit in terms of risk reduction is actually the national systematic risk level. However, in addition to national diversification, investors can also choose international diversification. HG Grubel (1968) first pointed out the importance of international diversification and the possibility of reducing portfolio risk below the level of systematic risk. His viewpoint was supported by BH Solnik (1974), H. Levy and Z. Lerman (1988), W. Bailey and R.M. Stulz (1990) and many others who emphasised the advantages of building an internationally diversified portfolio, i.e. the benefits of investing money in foreign securities.

In addition to choosing the optimal diversification method, economists have been trying to determine the optimal number of securities in a portfolio for decades. The first study to measure the effect of increasing portfolio size on risk reduction for the purpose of determining the optimal size of a portfolio was conducted by J.L. Evans and S.H. Archer (1968), who found that, eight to ten securities in an average portfolio are sufficient to achieve the greatest amount of benefit from diversification. The authors argued that a portfolio of 15 securities is fully diversified, therefore any further increase in the number of securities held in such a portfolio does not affect risk reduction. M. Statman (1987) rejects the above conclusion based on his research, which shows that an optimally diversified portfolio should include at least 30 securities.

Simple and Efficient Investment Diversification

According to this approach, investing in 100 different securities is ten times less risky than investing in 10 securities. Furthermore, they are not interested in determining the correlation between the returns of individual securities in a portfolio. Traditional portfolio theory and its proponents do not recognise the importance of correlation for portfolio construction. According to traditional portfolio theory, if investors want to eliminate risk, they must invest in a large number of securities; therefore, during the period when traditional

portfolio theory was considered to be the most influential concept, portfolio performance was evaluated based solely on actual returns.

Besides ignoring correlation altogether, another important drawback of simple diversification, as a rule, is reflected in an excessive number of securities in the portfolio. An excessive number of components in an investment portfolio leads to high transaction costs associated with portfolio construction and portfolio management. Therefore, it can be concluded that simple diversification is a traditional approach to diversification; however, it is still applied in practice by investors and portfolio managers using heuristics (mental shortcuts), such as the application of the 1/N rule.

According to HM Markowitz (1952), efficient diversification implies that investors should avoid securities with high covariance among themselves when constructing their investment portfolio. In the extreme case of perfectly positively correlated securities, diversification has no effect on risk. However, in all other cases, i.e. in every instance where the correlation between the returns on the securities is less than perfectly positive, such diversification will help reduce risk without compromising expected returns.

The effect of efficient diversification in reducing such uncertainty, i.e. investment risk, can be interpreted mathematically. The general formula used for calculating portfolio variance is written as follows (Elton, Gruber, Brown & Goetzmann, 2011, 58):

$$\sigma_p^2 = \sum_{i=1}^n w_i^2 \sigma_i^2 + \sum_{i=1}^n \sum_{\substack{j=1 \\ i \neq j}}^n w_i w_j \sigma_{ij}$$

If investors apply effective diversification, their portfolio will not contain unsystematic risks (risks inherent to the issuing company, such as insolvency risk, failure of promotional activities, labour strikes, etc.), but only systematic risks (risks inherent to the entire market, such as interest rate risk, foreign exchange risk, inflation risk, etc.). Systematic risks are risks that are compensated by the market itself, while unsystematic risks are risks that cannot be compensated. Therefore, in the case of a properly constructed portfolio, systematic risk-risk that cannot be eliminated by applying diversification-is the only type of risk that is considered relevant. Certain empirical studies show that in the absence of constraints simple investment diversification is a more successful investment strategy in terms of reducing investment risk compared to efficient diversification.

Combination of Expected Return and Risk through Diversification of L Q 45 Stocks

Diversification in LQ-45 stocks can be used as an alternative investment option. These stocks consist of 45 stocks that have high liquidity and also consider capital market capitalisation which is always monitored by the IDX. Although the IDX monitors LQ- 45 stocks regularly, investors still question whether these stocks are really worthy or valid as leading stocks compared to stocks that do not join the LQ-45.

Previous research has been conducted by Wiwit Hariyanto (2018) related to expected returns on LQ-45 stocks. The population in the study were all LQ-45 stocks for the period February 2012-January 2015 on the Indonesia Stock Exchange. In determining the sample, researchers used purposive sampling so that 14 shares of issuers were selected. The criteria for selecting LQ-45 stock samples are as follows:

1. The shares have been listed and traded on the Jakarta Stock Exchange during the period February 2012 - January 2015.
2. The stocks are included in the list of LQ-45 stocks that have been or can be active and always appear for six consecutive trading periods in the stock exchange market.

The results showed that the highest expected return of each LQ-45 stock was owned by Kalbe Farma, which was 0.2509 or 25.09%, with a stock risk level (variance) of 0.0612 or 6.12%. Furthermore, there are shares of Gajah Tunggal company amounting to 0.0911 or 9.11% with a stock risk level (variance) of 0.0303 or 3.03%. This is because Kalbe Farma's share price increased sharply at the end of 2013, while the Gajah Tunggal company, the increase in share price, occurred in the middle of 2013. In addition, both companies have stable share prices and have very good business prospects for the next few years.

The company that provides the smallest profit is Indosiar Visual Mandiri (IDSR) of 0.0154 or 1.54%. This happened because Indosiar Visual Mandiri experienced a decline in 2013 and mid-2014. Investing in a portfolio with many securities requires courage to bear the risk of loss. This risk can be minimised by measuring expected return.

Portfolio formation using the single index model can be concluded that securities that move together are not due to effects outside the market, for example the effects of the industry or the company itself. But because it has a general relationship to the market index. In addition, the return and risk of the optimal portfolio are also very dependent on the development of stock prices, so to get better results from the optimal portfolio strategy, investors should always monitor stock price movements both daily and monthly then carry out the stock selection calculation process and determine the optimal portfolio, plan investments in the optimal portfolio, implement investment strategies in the optimal portfolio and also hold and buy strategies.

How Investors Minimise Risk in PT Vale Indonesia Tbk. and PT Kalbe Farma Tbk.

Risk is defined as the difference between expected return and realisation. The greater the deviation, the higher the risk. People are generally risk-averse. A high-risk investment will be taken if the return is worth the risk. Investors who want certainty of return will choose low-risk or no-risk investments such as deposits and government bonds because the return is certain.

Previous research was conducted by Muhammad Ramadhan, Titing Suharti, Immas Nurhayati (2020) by analysing single stock returns, single expected returns, investment risk, portfolio expected returns, correlation coefficient analysis, and portfolio risk that have been obtained on the Indonesia Stock Exchange. The following formula is used to measure single stock returns, single expected returns, investment risk, portfolio expected returns, correlation coefficient analysis, and portfolio risk.

1. Calculating stock *returns*.

$$R_i = \frac{P_t - P_{t-1}}{P_{t-1}}$$

Obtained, PT Vale Indonesia Tbk = 0.90161 PT

Kalbe Farma Tbk = 0.30178

2. Calculating Expected return

$$E(R_i) = \sum_{j=1}^N P_{ij} R_{ij}$$

Obtained, PT Vale Indonesia Tbk = 0.01503 PT

Kalbe Farma Tbk = 0.00503

3. Calculating Investment Risk

$$\sigma^2 = \sum_{j=1}^N \frac{[(R_{ij} - E(R_i))]^2}{N}$$

dan

$$\sigma = \sqrt{\sigma^2}$$

Obtained, PT Vale Indonesia Tbk = 0.15652 PT

Kalbe Farma Tbk = 0.05925

4. Calculating Portfolio Expected Return

$$E(R_p) = \sum_{i=1}^n W_i E(R_i)$$

5. Calculating the Correlation Coefficient

$$P_{12} = \frac{n \sum XY - \sum X \sum Y}{\sqrt{[n \sum X^2 - (\sum X)^2][n \sum Y^2 - (\sum Y)^2]}}$$

Then obtained $p_{12} = -0.04362$

6. Calculating Portfolio Risk

$$\sigma_p^2 = X_1^2 \sigma_1^2 + X_2^2 \sigma_2^2 + 2 [X_1 X_2 P_{12} \sigma_1 \sigma_2]$$

Dan

$$\sigma_p = \sqrt{\sigma_p^2}$$

Based on the results of the analysis of the level of profit and risk obtained from the shares of PT Vale Indonesia Tbk and on the shares of PT Kalbe Farma Tbk from 2014 to the year. 018, namely the expected level of profit (Expected Return) of PT Vale Indonesia Tbk shares is 0.01503 while at PT Kalbe Farma is 0.00503. And for the amount of risk level in each of these stocks is 0.15652 for PT Vale Indonesia Tbk and 0.05925 for PT Kalbe Farma Tbk. However, by doing diversification, namely investing by choosing two companies from different sectors, we get optimal results with high returns and minimum risk with a composition of 80% in PT Vale Indonesia Tbk shares and 20% in PT Kalbe Farma Tbk shares, obtained a return of 0.01303 with a risk of 0.01569.

CONCLUSIONS AND ADVICE

By the time traditional portfolio theory was, in concept, generally accepted, the correlation between the returns of individual securities held was ignored. Hence, the number of investment portfolio components was excessive and led to large portfolio management costs. Efficient diversification is a new model of investment diversification, which considers the correlation between the returns of individual securities. Investment in the capital market is attractive because there are many alternatives that can be obtained with their respective levels of risk. In the event that the investor faces investment risk, diversification can minimise the risk and take into account the return. Diversification in LQ-45 stocks can also be an alternative choice in investing.

The number of securities in a portfolio required to achieve a satisfactory diversification effect depends on the correlation between the returns of individual securities. A positive correlation implies more securities, while a negative correlation requires fewer securities to be included in an efficiently diversified portfolio. If the number of securities in a portfolio is very small, it potentially leads to high unsystematic risk, while a large number of securities incurs high transaction costs both in terms of creating such a portfolio and in terms of high portfolio management costs.

A large number of studies argue that elements of behavioural portfolio theory. the benefits of international investment diversification are still considerable; however, many authors warn that the only way to arrive at valid conclusions is to include realistic assumptions about asymmetric correlations. In this regard, it can be concluded that the benefits of international diversification in periods of calm markets are greater than in periods of market turbulence. Furthermore, it is concluded that during turbulent periods, the distinction between net market sub-periods and bull market sub-periods should be made because, in the case of bull markets, the benefits of international market diversification are significantly higher than in bear market conditions.

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