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The Role of Portfolio Theory in Risk Management and Investment Decision Making

Syahriatul Mahmudah[1], Widi Lstiyas Rini[2], Aditya Maulana Majid[3]

Departemen of Magister Manjamen, Institut Teknologi dan Bisnis Widya Gama Lumajang, Indonesia[1,2,3]

Corresponding Author: widilistiyas@gmail.com

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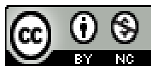
ABSTRACT

This article discusses the important role of portfolio theory in the context of risk management and investment decision making. Portfolio theory, introduced by Harry Markowitz in 1952, has become a major foundation in the world of finance. The basic concept of this theory regarding asset diversification to achieve a desired level of return with acceptable risk, provides a strong scientific foundation in risk management and investment decision making. In this article, we review the basic concepts of portfolio theory, diversification strategies, and their application in managing risk holistically. In addition, this article also discusses how portfolio theory helps investors make more informed investment decisions by analyzing risks and returns rationally. Based on previous research, we also explore the contribution of portfolio theory in creating company value and provide practical guidance for investors in forming efficient portfolios. Thus, this article provides a more comprehensive understanding of the relationship between risk, investment, and company value as well as the importance of portfolio theory in achieving financial goals.

Keywords: Investment Decision Makin, Portifolio Theory, Risk Management.



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INTRODUCTION

Portfolio theory, which was first introduced by Harry Markowitz in 1952, has become the main foundation in risk management and investment decision making. This theory's basic concept of diversifying assets to achieve a desired level of return with acceptable risk provides a strong scientific foundation in the world of finance.(Liestyowati et al., 2023)One of the main pillars of portfolio theory is diversification, which aims to reduce risk by spreading investments across different assets(Nurid, 2017). In this context, portfolio theory helps manage risk by avoiding reliance on the performance of individual stocks and reducing the impact of significant price fluctuations(Management, 2023). Risk management is a crucial aspect of investing, and portfolio theory provides guidance in identifying, assessing and managing risks systematically. This framework involves not only diversification, but also effective risk mitigation strategies to protect capital(Siregar & Amalia, 2020). Risk management involves a series of steps such as risk identification, risk assessment, development of mitigation strategies, and monitoring(Septyanto,

2013). Portfolio theory provides insight into how to integrate these components in an investment context(Yunita Wulan Dewi & Sri Darma, 2019).

Investment decisions involve asset selection, portfolio allocation, and configuration of financial instruments. In this case, portfolio theory provides a rational risk and return analysis guide, helping investors make informed investment decisions(Halimah, 2020). The close relationship between portfolio theory and risk management can be seen through portfolio diversification(Prastika, 2022). Diversification not only reduces specific risks, but also helps manage systematic risk or market risk by dealing with market fluctuations more resiliently(et al., 2021). Market Influence and Investor Behavior: Portfolio theory not only takes market factors into account, but also takes into account investor behavior. The gap between rational and irrational behavior is the focus in investment decision making, which is integrated with the concept of portfolio theory. Portfolio evaluation through performance measurement is an integral part of investment decision making. Portfolio theory provides metrics such as the Sharpe ratio and Jensen index to evaluate portfolio performance in a more measurable manner(Putra & Yadnya, 2016).

With ever-changing market dynamics, portfolio theory continues to evolve to understand and adapt to changes in the investment environment(Mardhiyah, 2017). Innovation in financial instruments is also a focus for understanding how to best exploit opportunities and manage risks. Factor models, such as models that consider specific and systematic risk factors, are also closely related to portfolio theory. The integration of factor models strengthens risk analysis and investment decision making in more complex contexts(Agil et al., 2023). Previous research entitled The Effect of Portfolio Diversification on Risk Management and Investment Performance: Analysis of Individual Investors.(Liestyowati et al., 2023)details the impact of portfolio diversification on risk management and investment performance among individual investors in Jakarta, Indonesia, using a sample of 110 investors through a structured survey. Overall, this research presents findings that can provide valuable insights in the context of investment decision making and risk management at the individual level. In the analysis of research results, it can be seen that portfolio diversification plays a central role in reducing investment risk. The significant negative correlation with standard deviation and beta confirms that diversification strategies are effective in managing market volatility and risk. These results are in line with the principles of Modern Portfolio Theory, where spreading investments across multiple asset classes is considered a smart approach to achieving these goals.

The Influence of Risk Management, Intellectual Capital and Profitability on Company Value(Halimah, 2020). This research aims to empirically test the influence of risk management, intellectual capital and profitability on company value, with a focus on food and beverages companies listed on the Indonesia Stock Exchange during the 2015-2018 period. The research finding that risk management variables have a positive effect on company value shows the importance of good risk management in improving company performance. This is consistent with literature that identifies risk management as a key factor in the formation of corporate value. Corporate Governance as a Risk Management Mechanism to Increase Company Value(Triyuwono et al., 2020). This research aims to examine the relationship between corporate governance, risk and company value with a focus on companies listed on the Indonesia Stock Exchange (BEI) during the 2013-2018 period. Research findings state that corporate governance has a positive and significant influence on risk. Meanwhile, risk has a positive and significant influence on company value. This point shows the important role of corporate governance in shaping the level of risk and value of the company.

Based on the analysis of previous research above which examines factors such as portfolio diversification, risk management, intellectual capital, and corporate governance on company value, several concepts and findings can be found that can contribute to the novelty of the research title "The Role of Portfolio Theory in Risk Management and Investment Decision Making." Which can provide novelty by emphasizing that portfolio theory is not only a framework for diversification,

but can also play a role in holistic risk management and provide a stronger basis for making smart investment decisions. The integration of corporate governance concepts can also provide a new dimension in understand how company policies can shape risk management and overall company value. Thus, the title broadens the scope of portfolio theory and provides a more comprehensive understanding of the relationship between risk, investment, and company value.

METHODS

This research uses the literature study research method, an approach carried out by analyzing and synthesizing relevant literature in a particular research field. Literature studies aim to develop an in-depth understanding of the research topic, identify conceptual frameworks, and evaluate existing findings. Literature studies help researchers to understand the development of knowledge in a particular field (Webster, 2014). By detailing the steps of topic identification, selection of information sources, data search and collection, literature analysis and synthesis, researchers can form a strong conceptual framework for future research.

RESULTS AND DISCUSSION

Based on the results of a review of 6 journals and 1 book, it was found that the role or influence of Portfolio theory on risk management and decision making is as follows:
In the first journal, the concept of modern portfolio theory is explained which is based on the understanding that most investors tend to avoid risk. This theory teaches how to combine shares in a portfolio to achieve maximum profits with a certain level of risk or gain profits with minimal risk. A strategy to reduce risk in investment is to diversify shares to form a portfolio. Portfolio refers to a collection of financial assets in one unit that is managed or owned by an investor, investment company, or institutionfinance(Anggraini, 2013). The basis of this portfolio theory is the recognition that generally investors in securities, or financial assets, do not invest all their capital in one type of stock, but rather allocate it to various types of stock. In other words, the principle of diversification is the main focus for parainvestors(Herdiyana, 2009). In this literature study, the journal authors explore the use of Management Information Systems (MIS) as a tool for forming optimal portfolios. Portfolio theory is applied in the investment context to design optimal portfolios, and one of the techniques used is the Single Index Model (SIM). SIM is an approach where all aspects related to the calculation of securities are consolidated through a formula known as a single index model. In this journal, it is stated that through this calculation, investors can more easily make decisions within the framework of a single index model, which is a method for identifying securities that can form an optimal portfolio. This model is an effort to simplify the Markowitz model, which considers various aspects so that the results can provide better assistance for investors in decision making. Therefore, being a careful and informed investor involves the application of portfolio theory as well as its implementation in investment practice.

Then from further literature sources, there are 2 journals that apply optimal portfolio formation to analyze decision making with case studies in the banking sector and a compass index of 100. In the second journal, the results of trial calculations show that there are 9 out of 35 banking shares that have the optimal portfolio category and from this category produces a return of 0.364% with a risk of 1.005%. Meanwhile, the same third journal uses a quantitative approach with the type of research, namely descriptive. This journal has the results that there are 13 company shares out of 34 stock samples that have an optimal portfolio composition with a portfolio return of 2.79% per month and a risk level of 1.23% per month. The fourth journal, which is slightly different from other literature journals, discusses the role of portfolios in the context of investment portfolio diversification as an important strategy in reducing the impact of biased behavior. This has a relationship in matters related to decision making, especially in the context of investment and risk management for both companies and MSMEs. Biased behavior is a person's tendency to make

decisions that may be irrational and influenced by certain experiences, emotions and personal beliefs. By diversifying your portfolio or spreading your investments across various assets, fatal risks caused by behavioral biases such as overconfidence and loss aversion can be easily considered and reduce their tendency.

Thenin the literature source of the book entitled "Investment Management and Portfolio theory" in the Portfolio theory chapter it is explained that the form of basic assumptions begins by assuming that the rate of return on securities in the future can be estimated, right, one can evaluate how risk tendencies might arise by considering variations in the distribution of returns . Within the framework of certain assumptions, portfolio theory produces a linear relationship between risk and return. In this context, the higher the risk associated with an investment or loan, the greater the expected rate of return to compensate for that risk. In Markowitz's theory, portfolios are related to investors' estimates of expected risks and returns, which are measured statistically to construct investment portfolios. In its implementation, investors generally diversify their investment portfolio by combining various securities, in other words, they form a portfolio. The meaning of this statement is that in Markowitz's theory, the concept of portfolio is closely related to the perception or estimate that an investor has regarding the level of risk and expected return from investment. This theory views a portfolio as a collection of financial assets that are arranged in such a way based on statistical estimates of risk and return. In practice, investors generally implement a diversification strategy in their investment portfolio, namely by combining various types of securities. By carrying out this diversification, they create a portfolio that can help reduce investment risk and increase potential returns.

Furthermore, in the fifth journal, it explains that the existence of a portfolio can ensure investors' choices and decisions can help achieve financial goals that have been set more consistently and can link investors' investments with these goals. Then apart from that, the journal states that portfolio diversification is the basic idea for investors to avoid the possibility of large losses by not placing all their assets in just one property. Portfolio diversification is a crucial strategy in achieving balance in a portfolio; This step involves allocating funds to different asset classes to reduce dependence on one type of investment. Making smart investment decisions also involves applying projections, risk management, and portfolio engineering strategies(Arvianita, 2021). And the sixth journal explains research by Liestyowati, et alemphasizes the vital role of portfolio diversification in the context of individual investors in Jakarta, Indonesia. This research highlights several key aspects and the existence of a negative correlation between the level of diversification and risk indicators, such as standard deviation and beta, this confirms the success of diversification in managing idiosyncratic and systematic risks. Investors who diversify their portfolios tend to experience more stable and less volatile investment results. In contrast to the general view that diversification is detrimental to investment results, our analysis shows that diversification has a significantly positive impact on investment performance (ROI). This emphasizes the importance of creating an efficient portfolio to optimize the trade-off between investment risk and return. Differences in diversification levels based on age and risk tolerance highlight the importance of adopting a personally tailored investment strategy. Younger investors, with longer investment horizons and higher risk tolerance, tend to diversify more aggressively, while older investors may choose a more conservative approach.

From the results of a literature review of 7 sources consisting of 6 journals and 1 book regarding the role of portfolio theory and its implementation, it can be seen that portfolio theory in business, namely investment, has a very significant influence.

The Role of Portfolio Theory

Portfolio theory plays a central role in risk management, decision making, and value creation in the investment context. The basic concept of this theory shows that investors tend to avoid risk, and a stock diversification strategy in a portfolio is the key to achieving the goal of maximum profits with measurable risk. Application of portfolio theory through tools such asManagement

information systems and models such as the Single Index Model (SIM) provide the basis for designing optimal portfolios. Through a single index model, investors can more easily make decisions by identifying the securities that form an optimal portfolio, providing a simplification of the Markowitz model. In decision making, portfolio theory offers the view that forming an optimal portfolio helps investors make smarter investment decisions. Portfolio diversification is not only a strategy to manage investment risk, but is also a solution to reduce the impact of biased behavior such as overconfidence and loss aversion. A diversification strategy is considered a crucial step in achieving balance in a portfolio, which involves allocating funds to different asset classes.
In addition, portfolio theory contributes to creating company value. Through portfolio diversification, companies can achieve financial goals more consistently, while implementing this theory in investment practice helps create added value for companies and investors. The research results show that portfolio diversification has a significantly positive impact on investment performance (ROI), creating more stable and less volatile investment results. The importance of personally tailored investment strategies is also highlighted in the context of portfolio theory. The correlation between diversification level, investor age, and risk tolerance emphasizes the need to adapt portfolio strategies according to investor characteristics and preferences. Thus, portfolio theory is not only a conceptual guide, but also provides practical direction for forming efficient portfolios, managing risk, and achieving financial goals more consistently.

The Role of Portfolio Theory in Risk Management
Portfolio theory plays an important role in investment decision making by providing a systematic framework for understanding how investors can achieve their financial goals with acceptable risk. By understanding the concepts of diversification, asset allocation, and risk measurement, investors can build a portfolio that is balanced between risk and expected return. Portfolio theory also helps investors to understand that no single asset is risk-free, but by investing in a diversified manner, risk can be reduced significantly. In addition, portfolio theory also provides a basis for understanding the relationship between risk and return, as well as how to choose the optimal combination of assets to achieve investment goals. By using the principles of portfolio theory, investors can make investment decisions that are more informed and better suited to their risk profile and investment objectives.

The Role of Portfolio Theory in Investment Decision Making
Portfolio Theory plays an integral role in investment decision making by providing a comprehensive framework for investors. By highlighting the importance of risk diversification, this theory encourages investors to spread their investments across multiple assets, thereby reducing the negative impact of a single price change. Additionally, portfolio theory helps investors understand the complex relationship between risk and return, enabling them to choose the optimal combination of assets according to their investment goals and risk tolerance. It also helps in determining appropriate asset allocation in a portfolio and provides a framework for analyzing portfolio performance as well as managing risks systematically. By applying the principles of portfolio theory, investors can make more informed investment decisions and be more effective in achieving their financial goals.

CONCLUSION

From the results of research using literature studies, it can be concluded that portfolio theory plays a very important role in risk management and investment decision making. The basic concepts of portfolio theory, such as asset diversification and risk measurement, provide a strong foundation for investors to achieve their financial goals with acceptable risk. Portfolio diversification is the key to reducing investment risk and creating added value for companies and investors.

In addition, portfolio theory provides systematic guidance in understanding the relationship between risk and return, as well as in selecting the optimal combination of assets. By applying the

principles of portfolio theory, investors can make more informed and effective investment decisions. Thus, portfolio theory is not only a conceptual framework, but also provides practical direction for forming efficient portfolios, managing risk, and achieving financial goals more consistently

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