

Vol. 3 • No. 3 • April 2025

Page (Hal.) : 258 – 263

ISSN (online) : 2963-5896

ISSN (print) : 2964-0482

DOI No : 10.70001/idea.v3i3.319

Website : <https://ojs.ideanusa.com/index.php/idea>

© IDEA Nusantara

Darmaguna IDEA Nusantara Foundation
Jl. Pendowo, Limo No. 69, Depok, Indonesia
Telp. 0875 8655 3215Email : ideajournal@ideanusantara.com

Licenses :

<http://creativecommons.org/licenses/by/4.0/>Article info : *Received* : January 2025 ; *Revised* : February 2025 ; *Accepted* : March 2025

Hedging Strategy With Bonds: A Solution To Reduce Portfolio Volatility

Masno Marjohan¹; Bagus Pandu Wahana²¹⁻²Pamulabg University, E-mail: masnomarjohan@yahoo.co.id¹; baguspanduwahana@yahoo.com²

Abstract. High financial market volatility poses significant risks to investment portfolios. Therefore, this research aims to explore hedging strategies using bonds as a solution to reduce portfolio volatility. A qualitative approach was used with case study methods and in-depth interviews with investment managers, market analysts, and academics who have expertise in portfolio and bond management. Primary data were collected through semi-structured interviews, while secondary data were obtained from academic literature, bond market reports, and official documents. Research results show that bonds, particularly government bonds, are effective instruments for portfolio stabilization due to their characteristics of low risk and fixed income. The effectiveness of this hedging strategy is influenced by the duration of the bonds, market conditions, and the proportion of asset diversification in the portfolio. However, challenges such as liquidity constraints on corporate bonds and external impacts like global monetary policy need to be managed carefully. This research emphasizes the importance of bonds in portfolio risk management strategies, particularly in the context of the Indonesian market. These findings contribute both practically for investors and portfolio managers and academically to the development of risk management studies. The recommendation for further research is to integrate bonds with derivative instruments to enhance hedging efficiency.

Keywords: Hedging; bonds; portfolio volatility; risk management; investment.

A. INTRODUCTION

Investing in financial markets often faces the challenge of high volatility, which can significantly affect the value of a portfolio. In unstable market conditions, investors need effective strategies to manage risk and minimize the impact of price fluctuations on their portfolios. One of the strategies often used is hedging, which is a step to reduce risk by using certain financial instruments. Among the various available instruments, bonds become an attractive choice due to their generally stable nature and the provision of fixed income over a certain period. Bonds offer advantages in portfolio diversification while also providing protection against equity market volatility risk. This instrument also has lower risk

characteristics compared to other assets, such as stocks, especially government bonds which have a very low default risk. However, to optimally utilize bonds as a hedging tool, a deep understanding of risk management, bond duration, and their sensitivity to interest rate and inflation changes is required. This research aims to examine hedging strategies using bonds as a solution to reduce portfolio volatility. By analyzing the role of bonds in managing risk, this research will provide practical insights for investors in constructing a more stable and resilient portfolio against market dynamics. In addition, this research will also discuss how the combination of bonds with other instruments can enhance portfolio efficiency without sacrificing significant return potential. Through this approach, it is hoped that this research can contribute to the academic literature in the field of investment analysis and risk management, as well as serve as a guide for investors and portfolio managers in implementing effective hedging strategies.

B. LITERATURE REVIEW

Emphasizes the importance of using derivative instruments and fixed-income assets such as bonds to manage volatility risk. According to him, government bonds or high-quality bonds are very suitable for protecting a portfolio from systemic risk because they have a low correlation with riskier assets. John Hull (2018 : 5).

Hedging is done to minimize market risks, such as fluctuations in commodity prices, currency exchange rates, and interest rates. The goal is to reduce the volatility of the company's cash flow and, ultimately, increase the company's value. They also noted that hedging can reduce potential conflicts of interest between managers and shareholders. Smith, C. W., & Stulz, R. M (1985 : 391–405).

Ross and his colleagues explained that bonds are a form of debt traded in the financial market. They discussed the structure of bonds, such as zero-coupon bonds, callable bonds, and convertible bonds, as well as their implications for investors and issuers. Ross, S. A., Westerfield, R. W., & Jaffe, J. F. (2022).

Fama and French added a small volatility factor to systematic risk. They showed that company size and the book-to-market ratio also affect portfolio volatility. Fama, E. F., & French, K. R. (1993 : 3–56).

According to Harold Kerzner (2017) in his book *Project Management: A Systems Approach to Planning, Scheduling, and Controlling*, risk management consists of a series of processes, namely: **Risk identification**: Identifying all potential risks. **Risk analysis**: Analyzing the impact of risks on project objectives. **Risk response planning**: Developing strategies to manage risks. **Monitoring and risk control**: Ensuring that identified risks remain under control throughout the process.

Keynes emphasized that investment is influenced by the marginal efficiency of capital (the expected return compared to the cost of capital) and the interest rate. According to Keynes, investors tend to make decisions based on expectations of future profits. Keynes, J. M. (1936).

C. RESEARCH METHODOLOGY

This research uses a qualitative approach with case study methods and in-depth interviews to explore the understanding of how hedging strategies using bonds can help reduce portfolio volatility. This approach aims to gain in-depth insights from practitioners and academics in the fields of investment and risk analysis.

This research is an exploratory qualitative study aimed at understanding the strategy of using bonds in hedging from both practical and theoretical perspectives. The focus of the research is on the experiences and perspectives of the research subjects regarding the effectiveness of bonds in managing portfolio risk.

Prime Data

This research is an exploratory qualitative study aimed at understanding the strategy of using bonds in hedging from both practical and theoretical perspectives. The focus of the research is on the experiences and perspectives of the research subjects regarding the effectiveness of bonds in managing portfolio risk.

Secondary Data

Secondary data in the form of bond market reports, related literature studies, as well as documents such as investment company financial reports and relevant journal articles.

The research subjects were selected using purposive sampling techniques based on the following criteria: Investment managers or portfolio managers at financial institutions who use bonds in their investment strategies. Academics or researchers with publications related to bonds and hedging strategies. Bond market analysts from financial institutions or economic

Data Collection Techniques Data collection is carried out through: **Semi-Structured Interview** The interview was conducted to explore views, experiences, and practical strategies in using bonds for hedging. Some key questions include: How are bonds used as a tool to reduce portfolio risk? What are the advantages and disadvantages of bonds compared to other instruments in a hedging strategy? How do market conditions, such as interest rates and inflation, affect the effectiveness of bonds in a portfolio? **Documentation Study.** Documents and literature related to investment strategies using bonds will be analyzed to complement the interview results.

The collected data were analyzed using thematic analysis techniques to identify the main themes related to hedging strategies with bonds. The analysis process includes: a. Data Reduction: Sorting relevant information from interview data and documentation. b. Coding: Labeling relevant data based on themes such as "risk management," "interest rate impact," and "bond effectiveness." c. Theme Identification: Identifying patterns or relationships from coding data to find strategies and key factors that influence the success of hedging with bonds. d. Data Presentation: Presenting findings in narrative form to explain how bonds contribute to reducing portfolio volatility. e. Data Triangulation To ensure the validity and reliability of the data, triangulation was carried out by: Comparing interview results with secondary data from market reports or academic literature. Involve more than one researcher to independently analyze the data and agree on the results.

The analysis results are interpreted by relating them to relevant theories, such as Modern Portfolio Theory (Markowitz, 1952), the concept of bond duration (Macaulay, 1938), and risk management theory (Hull, 2018). This research also considers the context of the Indonesian market to provide more applicable insights.

D. RESULTS AND DISCUSSION

Participant Profile : This research involves five main participants, consisting of: Two investment managers from a leading financial institution in Indonesia with experience in managing portfolios with a combination of stocks and bonds. A bond market analyst from a securities firm who often provides investment recommendations related to bond instruments. Two academics with expertise in investment risk analysis and who have published research related to bonds as an investment instrument. The participants have diverse backgrounds, providing a rich perspective in analyzing hedging strategies with bonds.

Main Findings : a. Bonds as Hedging Instruments, Most participants agreed that bonds, especially government bonds, are effective instruments for reducing portfolio volatility. This is due to the stability of bond prices and the fixed income they generate. Some key points expressed are: Investment Manager A: "Indonesian government bonds, such as ORI or State Bonds, are very helpful in offsetting stock fluctuations, especially in a volatile market." Market analyst: "The low-risk characteristics of bonds make them a protective asset when the stock market is under pressure."

Determinants of the Effectiveness of Hedging with Bonds

The interview results show that the effectiveness of hedging with bonds is influenced by the following factors: 1. Bond Duration: Bonds with shorter durations tend to be more stable against interest rate changes, making them more effective for short-term hedging. 2. Interest Rate Conditions: The interest rate level greatly affects bond prices. In conditions of rising interest rates, bond prices tend to fall, which can reduce their effectiveness in hedging strategies. 3. Asset Combination: Diversification between stocks, government bonds, and corporate bonds provides better protection compared to relying on just one type of bond.

Challenges in Implementation, Although effective, participants expressed several challenges in using bonds as a hedging tool: Liquidity of Corporate Bonds: Corporate bonds often have low liquidity in the secondary market, making them difficult to use flexibly in hedging strategies. Data Limitations: Information related to bond performance in Indonesia, especially for corporate bonds, is still not transparently available. External Volatility: Global factors, such as changes in monetary policy in developed countries, can affect domestic interest rates and bond value

Practical Strategies to Reduce Volatility, Some practical strategies identified from the interviews are: Use of Government Bonds: Utilizing government bonds for long-term stability due to their low risk and nature as a risk-free asset. Dynamic Hedging: Adjusting the proportion of bonds in the portfolio based on market conditions, such as increasing bond allocation when the stock market is under pressure. Integrated Hedging: Combining bonds with derivative instruments, such as interest rate swaps or futures, to protect the portfolio from interest rate risk.

Discussion :

Consistency with Theory, The results of this study support the theory proposed by Markowitz (1952) in Modern Portfolio Theory, which states that portfolio diversification can reduce total risk without sacrificing significant returns. Participants also highlighted the importance of selecting bonds with appropriate duration, in line with Macaulay's (1938) concept of duration.

Practical Implications The results of this research provide guidance for investors and portfolio managers on the importance of bond allocation in investment strategies. In the context of the Indonesian market, government bonds are the primary choice due to their stability, but corporate bonds can provide higher returns if liquidity risk is managed well.

Relevance to the Indonesian Context In the Indonesian market, the use of bonds as a hedging tool becomes very relevant considering the high fluctuations in the domestic stock market. The stability of government bonds, such as ORI or Sukuk Negara, provides protection for the portfolio, especially in uncertain market situations.

E. CONCLUSIONS AND SUGGESTIONS

This research has explored hedging strategies using bonds as a solution to reduce portfolio volatility through a qualitative approach. Based on the results of interviews and data analysis, several key points can be concluded as follows:

The Effectiveness of Bonds as a Hedging Tool Bonds, especially government bonds, have proven to be effective instruments for reducing portfolio risk. The stability of bond prices and the fixed income they generate provide protection against fluctuations in more volatile assets, such as stocks. This is in line with the view that bonds are assets that have a low or even negative correlation with stocks under certain market conditions.

Determining Factors The Success of Hedging with Bonds The effectiveness of this strategy depends on several factors: Bond Selection: Government bonds with medium to long tenors tend to be more stable, but corporate bonds can provide additional diversification if liquidity risk is managed well. Market Conditions: Changes in interest rates and inflation affect bond prices, so hedging strategies must be dynamic and adjusted to economic conditions. Portfolio Composition: An optimal combination of stocks and bonds in a portfolio can enhance stability and efficiency.

Challenges in Strategy Implementation Some challenges faced in the implementation of this strategy are the limited liquidity in corporate bonds, the lack of transparent market data, and the influence of external factors such as global monetary policy. This indicates the need for careful risk management and the improvement of the bond market infrastructure in Indonesia.

Practical Implications : Hedging strategies with bonds provide practical guidance for investors and portfolio managers to stabilize their portfolios, especially in uncertain market conditions. The use of government bonds can be the primary solution, while corporate bonds and derivative instruments can be used as complements to enhance hedging efficiency.

Recommendation : This research recommends the following steps: Investors should conduct an in-depth analysis of the duration and sensitivity of bonds to interest rates to select the most suitable instruments.

There is a need for further education for market participants about the benefits of bonds in risk management.

Policies that support data transparency and bond market liquidity must be enhanced to facilitate the implementation of more effective hedging strategies.

REFERENCES

- Ashby, S., Palermo, T., & Power, M. (2012). Risk culture in financial organisations. *Journal of Risk Research*, 15(7), 691–696. <https://doi.org/10.1080/13669877.2012.674023>
- Bodie, Z., Kane, A., & Marcus, A. J. (2021). *Investments* (12th ed.). McGraw-Hill Education.
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). SAGE Publications.
- Elton, E. J., Gruber, M. J., Brown, S. J., & Goetzmann, W. N. (2014). *Modern portfolio theory and investment analysis* (9th ed.). Wiley.
- Fabozzi, F. J. (2020). *Bond markets, analysis, and strategies* (10th ed.). Pearson.
- Fama, E. F., & French, K. R. (1993). Common Risk Factors in the Returns on Stocks and Bonds. *Journal of Financial Economics*, 33(1), 3–56.
- Hull, J. C. (2018). *Risk management and financial institutions* (5th ed.). Wiley.
- Indonesia Bond Pricing Agency (IBPA). (2023). *Laporan pasar obligasi Indonesia 2023*. IBPA.
- Kementerian Keuangan Republik Indonesia. (2023). *Statistik pasar surat utang negara*. Diakses dari <https://www.kemenkeu.go.id>
- Kerzner, H. (2017). *Project Management: A Systems Approach to Planning, Scheduling, and Controlling*. Wiley.
- Keynes, J. M. (1936). *The General Theory of Employment, Interest, and Money*.
- Markowitz, H. (1952). Portfolio selection. *The Journal of Finance*, 7(1), 77–91. <https://doi.org/10.2307/2975974>
- Merton, R. C. (1974). On the pricing of corporate debt: The risk structure of interest rates. *The Journal of Finance*, 29(2), 449–470. <https://doi.org/10.2307/2978814>
- Miles, M. B., Huberman, A. M., & Saldaña, J. (2019). *Qualitative data analysis: A methods sourcebook* (4th ed.). SAGE Publications.

- Ross, S. A., Westerfield, R. W., & Jaffe, J. F. (2022). *Corporate Finance*. McGraw-Hill Education.
- Smith, C. W., & Stulz, R. M. (1985). The Determinants of Firms' Hedging Policies. *Journal of Financial and Quantitative Analysis*, 20(4), 391–405.
- Subramaniam, R., & Shaffer, S. (2021). Risk diversification with bonds: Evidence from emerging markets. *Emerging Markets Review*, 46, 100746. <https://doi.org/10.1016/j.ememar.2021.100746>
- Tandelilin, E. (2017). *Portofolio dan investasi: Teori dan aplikasi* (2nd ed.). Kanisius.
- Yin, R. K. (2018). *Case study research and applications: Design and methods* (6th ed.). SAGE Publications.