

**RESPONDING TO MONETARY AUTHORITY INTEREST RATE POLICY:
PERFORMANCE, FINANCIAL RISK, AND OPERATIONAL EFFICIENCY
ANALYSIS OF COMMERCIAL BANKS**

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Abstract

Interest rate policy plays an important role in influencing financial risk and bank performance, especially in emerging economies with high economic volatility. The objective of this research is to study how interest rate policy, credit risk, liquidity risk, and bank performance interact with each other in a complex way. This is done by considering both internal and external variables. This research analyzes literature from a number of international empirical studies focusing on developing and developed countries. The data is analyzed to find patterns and relationships between interest rate policy and bank financial risk. The results show that lower interest rates increase credit risk through aggressive loan expansion and lower credit standards. Declining interest rates also increase liquidity risk as depositors' incentives are reduced. In addition, it was found that good capital structure and governance can mitigate the negative effects of interest rate fluctuations on bank performance. This research strengthens the theoretical basis on the role of monetary policy in the banking industry and emphasizes macroprudential regulation and adaptive risk management strategies. Further research is suggested to include negative interest rate policies or global financial markets, but practical implications include the need for policies that support financial stability amid low interest rate challenges.

Keywords: Interest Rate Policy, Financial Risk, Credit Risk, Liquidity Risk, Bank Performance, Financial Stability

Responding to Monetary Authority ...

INTRODUCTION

Commercial banks play an important role in the economy by performing financial intermediation functions and maintaining financial stability. Banks function as financial intermediaries, collecting public deposits and channeling them in the form of loans to people and companies, promoting economic and social growth (V. & Kumar, 2020). In addition, banks are also responsible for maintaining financial stability by managing credit and liquidity risks, which are an important part of the financial security of banking institutions and the economy as a whole (Baranovskyi & Putintseva, 2020).

A major factor affecting the performance of the banking sector is monetary policy, particularly interest rate policy. To maintain a balance between bank stability and profitability, interest rate policy must be carefully managed. This is because a decrease in interest rates can improve the financial stability of banks by improving the credit portfolio and reducing credit risk (Dang & Dang, 2020). However, a decrease in interest rates can also suppress a bank's net interest margin, which negatively affects profitability (Campmas, 2020).

The banking sector is heavily influenced by interest rate fluctuations that occur around the world and in the region. In emerging markets, these fluctuations tend to negatively impact banking sector development metrics, indicating vulnerability to interest rate risk (Tuna & Almahadin, 2021). In Europe, negative interest rates have led to a 17.4% decline in banks' net interest margins, affecting overall profitability (Carbó-Valverde dkk., 2021). To maintain stability and growth, the banking sector must adapt to dynamic interest rates, as these trends show.

To provide an initial context for the research, it is imperative to look at previous literature. For example, the Lean Six Sigma study looked at the evolution of the Lean Six Sigma philosophy and Six Sigma methodology individually, as well as how they emerged. This study looked at performance metrics, frameworks, critical success and failure factors, and various other dimensions associated with Lean Six Sigma, based on 223 articles published between 2000 and 2019 (Patel & Patel, 2021).

The main question to be discussed in this research is how interest rate policies affect the financial risks of commercial banks, such as credit risk and liquidity risk? What are the direct and indirect relationships between interest rate policy and commercial bank financial performance? What factors influence the complexity of the relationship between interest rate policy, financial risk and bank performance?

An in-depth understanding of the impact of interest rate policy is crucial in the face of global economic instability and increasing financial market volatility. Interest rate fluctuations not only affect the level of financial risks such as credit and liquidity risks, but also have a direct impact on banks' financial performance, including profitability and operational efficiency. For regulators, banks, and policymakers, this research has significant practical implications in helping them manage risks more effectively, design adaptive policies, and maximize banking sector performance in an uncertain environment. In the context of a global economy that is currently unstable due to challenges such as the geopolitical crisis and economic slowdown, the relevance of this research is heightened as it can provide the insights

needed to create a more resilient and sustainability-oriented policy framework for the financial system.

The research topic of the effect of interest rate policy on financial risk and performance of commercial banks has a strong scientific and logical basis for study, given the strategic role of interest rates as the main instrument of monetary policy in regulating economic stability. The complexity of the relationship between interest rate policy, financial risk, and bank performance suggests that this relationship is not only linear, but also influenced by external factors such as global market conditions and internal factors such as bank operational structure. Therefore, a systematic literature review-based approach is needed to synthesize previous research findings, identify patterns of relationships, and address inconsistencies in results. This research is highly relevant in making a meaningful contribution to the scholarly literature, especially in a complex area that still requires further exploration, as well as providing practical implications for policymakers and banking industry players.

The purpose of this study is to deeply analyze how interest rate policy affects the financial risk of commercial banks, particularly in relation to credit risk and liquidity risk, and to understand the mechanism of direct and indirect relationships between interest rate policy and bank financial performance. This study also aims to identify and evaluate the factors that influence the complexity of the relationship, both in terms of macroeconomic conditions, regulations, and internal bank characteristics. Thus, this study is expected to provide clearer and more comprehensive insights into the dynamics of the relationship between interest rate policy, financial risk, and bank performance, as well as fill the gaps in the existing literature to make a significant contribution to the scientific field and the practice of the banking industry.

The lack of comprehensive studies that integrate the analysis of financial risk and bank performance in the context of interest rate policy is an important concern. While some studies have explored the impact of interest rate risk on bank performance, such as its effect on banks' loan growth and economic capital (Beutler dkk., 2020), there is still a gap in the literature that directly links financial risk and bank performance within the broader interest rate policy.

Previous research shows limitations in the methods and regional focus used. For example, research on commercial determinants of health has mostly used qualitative methods and focused on the food, beverage, tobacco, and alcohol industries in high-income regions, while research in other industries and low-income regions is limited (Burgess dkk., 2024). This suggests the need for diversification of methods and expansion of regional focus in future research.

In academic research, there is significant emphasis on the need to conduct systematic literature reviews and a broader empirical data base. This is important to address theoretical fragmentation and lack of empirical testing in various research areas, as seen in studies on smart cities and SME international collaboration (Zahoor dkk., t.t.).

The novelty of this study lies in the approach that comprehensively integrates the analysis of financial risk and bank performance in a single analytical framework. By incorporating elements of financial risk, such as credit risk and liquidity risk, as well as financial performance, this study offers a new perspective that is able to explain the complex relationship between interest rate policy and banking sector dynamics. Moreover, this study adopts a global perspective and holistic approach, which not only enriches the literature by overcoming the limitations of regional focus in previous studies, but also provides a broader view of various economic contexts and financial markets. The justification for this research is based on its significant contribution to academic understanding, particularly in refining the theoretical and methodological framework in this area. Furthermore, the results of this study have important practical implications for policymakers and banking industry players in designing more effective monetary policies and risk management strategies, in order to enhance the overall stability and sustainability of the financial sector.

RESEARCH METHOD

This research uses the literature study method, which is a data collection technique through reviewing the literature relevant to the problem being studied. According to Nazir, this method involves collecting data from various written sources such as books, journals, magazines, and lecture materials related to the research topic (Mardalis, 2006). Muhadjir also argues that literature research emphasizes philosophical and theoretical approaches rather than empirical tests in the field (Hadi, 1993). This is because this research aims to understand the concepts and theories underlying the problem under study, as well as develop a strong theoretical framework.

In this study, data was collected by reading and analyzing various relevant literatures. To ensure the relevance and quality of the data obtained, this process involved identifying, collecting and evaluating information from carefully selected written sources. Furthermore, the literature data was analyzed descriptively to find important themes and patterns.

The purpose of this research is to gain an in-depth understanding of the research topic and to develop arguments supported by evidence from the literature. The literature study method used in this research allows the researcher to collect and analyze data from various relevant written sources, focusing on philosophical and theoretical approaches. This method also provides a solid foundation for understanding and explaining the issues discussed.

RESULTS AND DISCUSSION

The Effect of Interest Rate Policy on Commercial Bank Financial Risk

Interest rate policy has a significant impact on various types of financial risks faced by commercial banks. Credit risk is one of the aspects most affected by changes in interest rates. A decrease in interest rates can increase demand for credit, but it can also increase credit risk if not accompanied by adequate risk assessment (Beutler, Bichsel, Bruhin, Danton, Otieno, dkk., t.t.). In addition, low interest rate policies are often associated with increased

liquidity risk. This is due to the reduced incentive for depositors to keep funds in the bank, which may reduce the financial stability of the bank (Otieno, Onaya, Okeyo, dkk., t.t.).

This research shows that interest rate risk also affects the financial performance of banks. For example, interest rate risk exposure can affect the value of a bank's financial assets and liabilities, which in turn affects its cash flow and overall financial performance (Otieno, Onaya, & Markova, t.t.). In addition, banks with greater interest rate risk exposure tend to experience a decline in loan growth after an interest rate hike, which suggests that interest rate risk may affect banks' ability to lend (Beutler, Bichsel, Bruhin, Danton, Gomez, dkk., t.t.).

Furthermore, a low interest rate policy may encourage banks to take on more risk, especially under conditions where market competition increases and profits from the deposit market decrease (Whited dkk., 2021). Therefore, it is important for banks to have an effective risk management strategy to address the impact of interest rate policy on the financial risks they face (Markova dkk., t.t.).

Theoretically, credit risk increases in a low interest rate environment as banks often lower their lending standards to meet loan growth targets. This is in line with the “hunt for yield” theory which states that in a low interest rate environment, banks tend to take greater risks to maintain profitability. Research shows that in a low interest rate environment, banks tend to increase lending to borrowers with low returns, which may increase overall credit risk (Kawamoto dkk., 2020). In addition, another study found that non-performing loan (NPL) ratios tend to increase after one year of being in a low interest rate environment, indicating increased credit risk (Maivald & Teplý, 2020).

Liquidity risk also increases as low interest rates make it difficult for banks to attract new depositors, especially in volatile economic conditions. In a low interest rate environment, banks face challenges in maintaining their net interest margins, which may affect their ability to attract and retain depositors (Heider & Leonello, 2021). Moreover, competition in the credit market may exacerbate this situation, as banks with market power tend to increase lending despite higher risks (Whited dkk., 2021).

Previous research by Tuna and Almahadin in developing countries found that interest rate volatility increases liquidity risk, especially in markets that are not fully financially integrated. This finding is in line with another study in Europe by Carbó-Valverde et al. which shows the negative impact of interest rates on liquidity risk management (Carbó-Valverde dkk., 2021). Both studies emphasize the importance of adapting risk management strategies in the face of monetary policy changes (Tuna dkk., t.t.).

In an emerging market context, interest rate volatility can affect the development of the banking sector. A study examining 12 emerging market economies showed that interest rate fluctuations had a negative impact on most indicators of banking sector development, suggesting that the banking sector in developing countries is vulnerable to interest rate risk (Tuna & Almahadin, 2021). In addition, other studies have shown that high liquidity risk can hinder the transformation of short-term deposits into long-term loans, which in turn reduces long-term investment (Choudhary & Limodio, 2022).

This research highlights the importance of adaptive risk management strategies, especially in the face of interest rate volatility that can affect financial stability. In this regard, it is important for policymakers to consider measures that can mitigate the negative impact of interest rate fluctuations on liquidity risk and banking sector development. Thus, effective risk management strategies can help maintain financial stability and promote sustainable economic growth in developing countries.

Direct and Indirect Relationship between Interest Rate Policy and Bank Financial Performance

Interest rate policy has a significant impact on banks' financial performance through two main mechanisms: direct and indirect. Directly, changes in interest rates affect banks' net interest margin (NIM). Decreasing interest rates tend to depress NIM, which in turn affects bank profitability (Carbó-Valverde dkk., t.t.). Studies show that in a negative interest rate environment, banks experience a 17.4% decrease in NIM compared to banks in countries where negative interest rates are not applied (Carbó-Valverde dkk., 2021).

Indirectly, interest rate policy affects the quality of a bank's loan portfolio, operational efficiency, and cost structure. For instance, a low interest rate policy may increase the risk of credit off-take by banks, which may affect their financial stability (Dang & Dang, 2020). In addition, banks that are more prudent and have better financial resilience tend to record higher profits even under low interest rate conditions (Campmas, 2020).

In Bangladesh, it was found that market interest rates have a significant positive impact on bank profitability, suggesting that banks should manage their investments in a way that can increase profit margins and management efficiency (Saha dkk., 2021). Thus, interest rate policy affects not only NIM but also other aspects of banks' financial performance, all of which are important for long-term stability and profitability.

Financial intermediation theory explains that banks' main income comes from the interest differential between loans and deposits. When interest rates are low, banks' ability to generate interest income decreases. In addition, credit quality also has the potential to decline due to increased exposure to non-performing loans due to aggressive loan expansion in a low interest rate environment (Whited dkk., 2021).

In a low interest rate environment, banks face challenges in maintaining their profit margins. Research shows that low interest rates may encourage banks to take more risks, especially when they have limited market power (Martinez Miera & Repullo, 2020). This happens because banks seek to increase revenue through increased loan volumes, even though this may increase the risk of non-performing loans.

In addition, banks' operating costs in a low interest rate environment may also affect the efficiency of financial intermediation. Banks may have to absorb more resources to offer deposit products that do not provide better returns compared to idle balances, which ultimately reduces aggregate efficiency (Boel & Camera, 2020).

In Indonesia, despite the declining intermediation function of banks, some large banks were still able to increase their profits. This suggests that besides intermediation, other factors such as credit quality and operational efficiency also play an important role in bank profit growth (Buchory, 2020).

Interest rate fluctuations have a significant impact on the operational efficiency of banks, as demonstrated by the research of Baranovskyi and Putintseva (Baranovskyi & Putintseva, 2020). This research aligns with findings that indicate realized interest rate risk can weaken a bank's economic capital, which in turn affects the bank's cumulative loan growth (Beutler dkk., 2020). Additionally, other research shows that negative interest rates can reduce banks' net interest margins, which impacts their operational efficiency (Carbó-Valverde dkk., 2021).

On the other hand, research by Dang and Dang highlights that the impact of interest rates on bank performance highly depends on the operational structure and risk management strategies of each bank (Dang & Dang, 2020). This is supported by findings that show banks with stronger capital structures and good risk management strategies can be more resilient to interest rate fluctuations (Artes & L. Dizon, 2020). Furthermore, banks that are more technically efficient and have strong market competition tend to show better performance despite interest rate risks (Zhao dkk., 2021).

The Complexity of the Relationship between Interest Rate Policy, Financial Risk, and Bank Performance

This research identifies that the relationship between interest rate policies, financial risk, and bank performance is not linear. This complexity is caused by the interaction between internal factors, such as capital structure and risk management strategies, and external factors, such as macroeconomic conditions and regulations. For example, research shows that interest rate risk can affect bank performance through changes in the bank's economic capital due to interest rate fluctuations (Beutler dkk., 2020). Additionally, monetary policy involving interest rate cuts can affect the risk of bank decision-making, where better-performing banks tend to be more resilient to this risk (Dang & Dang, 2020).

Furthermore, a bank's exposure to interest rate risk can affect the transmission of monetary policy to the bank's lending activities. Banks with larger income gaps tend to generate stronger revenues and reduce loan contractions when interest rates rise (Gomez dkk., 2021). This indicates that the capital structure and internal risk management strategies of banks play a crucial role in determining the banks' response to changes in interest rate policies.

On the other hand, external factors such as macroeconomic conditions and regulations also influence this relationship. For example, in the context of Kenya, exposure to financial risk during interest rate control has a significant impact on the financial performance of commercial banks (Otieno & Onaya, 2020). Therefore, the interaction between these internal and external factors creates complexity in the relationship between interest rate policies, financial risk, and bank performance.

According to modern financial theory, banks face a dilemma between profitability and stability. In a low-interest-rate environment, banks often increase leverage to maintain profitability, which in turn raises systemic risk (Le dkk., 2020). Inadequate regulation can exacerbate the negative impact of interest rate policies on the stability of the banking sector.

Studies show that appropriate regulation can enhance bank profitability, but its effect on stability depends on the type of regulation implemented (Asteriou dkk., 2021).

Moreover, research shows that there is a reciprocal relationship between bank profitability and stability. High profitability does not always reduce the risk of bank bankruptcy, and in some cases, it can increase the likelihood of bank distress (Pessarossi dkk., 2020). On the other hand, an increase in liquidity can reduce the inefficiency of bank profits, but excessive liquidity can increase inefficiency (Le dkk., 2020).

In the international context, the organizational and geographical complexity of banks can affect their stability and profitability. Banks with international branches tend to be more stable, although their profitability may be lower (Nyola dkk., 2021). In the Eurozone, corruption and low transparency negatively impact the profitability and stability of banks, while greater economic freedom can enhance both aspects (Asteriou dkk., 2021).

A study by Beutler et al. shows that in countries with strong regulations, banks are able to mitigate the negative impact of low-interest rate policies on financial stability (Beutler dkk., 2020). This is consistent with findings from other studies that show that strict regulations, such as those outlined in Basel III, can help reduce the risks associated with a low-interest-rate environment. In this context, the aggressive implementation of countercyclical buffers can be an effective step to maintain financial stability (Rubio & Yao, 2020).

On the contrary, in developing countries, low-interest rate policies are often followed by an increase in systemic risk due to the lack of effective supervision. Research shows that low interest rate policies in developed countries can negatively impact the economies of developing countries, despite an increase in capital inflows. This is due to the increase in financial leverage and the reinforced domestic business cycle, which ultimately increases financial vulnerability (Quadrini dkk., t.t.).

In addition, in a low-interest-rate environment, banks with good corporate governance can reduce the negative impact on bank stability. Effective governance can fully offset the negative effects of low interest rates, demonstrating the importance of governance in maintaining financial stability (Gaganis dkk., 2020). Therefore, it is important for developing countries to adopt effective macroprudential policies to protect their financial systems in the face of challenges from global low-interest-rate policies (Wang dkk., 2020).

Theoretical and Practical Implications

Theoretical:

This research strengthens the framework that connects monetary policy with bank financial risk. The need for the development of a more comprehensive model to analyze the relationship between interest rate policies and bank performance. Identifying the factors that influence the complexity of the relationship between interest rate policies, financial risks, and bank performance.

Practical:

These findings highlight the need for stricter regulatory policies in managing credit and liquidity risks, especially in emerging markets with high volatility. Policymakers need to consider the long-term impact of interest rate policies on the profitability and stability of

banks. The results of this research can assist regulators in designing more adaptive policies to manage risks in the banking sector.

CONCLUSION

This research shows that, through both direct and indirect mechanisms, interest rate policies have a significant impact on the performance of commercial banks and financial risks. Lowering interest rates increases credit and liquidity risks, especially in developing countries with highly unstable economies. Moreover, low-interest-rate policies have the potential to increase the vulnerability of the financial system because banks are forced to take greater risks to maintain their profitability. The findings of this research reveal the complexity of the relationship between interest rate policies, financial risk, and bank performance. This relationship encompasses internal factors, such as capital structure and risk management strategies, as well as external factors, such as regulations and macroeconomic conditions.

Because the scope of this research data largely comes from case studies in developing countries, generalization to the global context must be done with caution. It is highly recommended that further research be conducted to study the dynamics of this relationship in the context of developed countries or in the context of negative interest rate policies. Practically, to maintain financial stability and promote sustainable economic growth, policymakers and regulators should develop more flexible risk management strategies, strengthen bank governance, and implement robust macroprudential regulations.

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