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Resilience Test: The Interplay of Macro Trends and Troubled Financing in Indonesian Sharia People's Financing Bank

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Abstrak,

Tren peningkatan BPRS Indonesia menunjukkan besarnya pembiayaan masyarakat. Namun, beberapa provinsi menghadapi permasalahan pembiayaan, dengan NPF yang melebihi 5%, terutama di daerah-daerah tertentu yang melebihi 10%. Tren makro berdampak pada kondisi sosio-ekonomi sehingga menimbulkan permasalahan keuangan, seperti fluktuasi inflasi, nilai tukar Rupiah yang tidak menentu, dan penurunan BI Rate yang signifikan mempengaruhi daya saing pembiayaan syariah dibandingkan pinjaman konvensional. Tujuan penelitian ini adalah untuk mengalisis hubungan antara faktor makro ekonomi dan pembiayaan bermasalah pada BPRS Indonesia. Metode Purposive Sampling menggunakan 20 provinsi Indonesia dengan asset terbesar dari tahun 2019-2022. Model analisis dengan Panel Granger Causalty menunjukkan terdapat hubungan antara nilai tukar dan NPF, tetapi pertumbuhan ekonomi, inflasi, dan BI Rate tidak berhubungan dengan NPF. Artinya, BPRS Indonesia memiliki eksposur nilai tukar yang signifikan dalam portofolio pembiayaan mereka. Oleh karena itu, pengelolaan risiko valuta asing yang hati-hati diperlukan, seperti melakukan hedging, memonitor pergerakan kurs secara berkala, dan mempertimbangkan kebijakan pemberian pembiayaan dalam mata uang lokal. Hedging syariah perlu diterapkan melalui kontrak forward agreement dan telah sesuai dengan ketentuan dari Fatwa DSN-MUI No.96/DSN-MUI/IV/2015, PBI No.18/2/PBI/2016 dan Opini DPS No. 17/26/DPS/XII/2015 tentang Rencana Transaksi Lindung Nilai (Hedging) Syariah.

Kata Kunci: Bank Pembiayaan Rakyat Syariah, Makroekonomi, Pembiayaan Bermasalah

Abstract,

The increasing trend of BPRS in Indonesia signifies extensive community funding. However, some provinces faced problematic financing, with NPF exceeding 5%, notably over 10% in certain areas. Macroeconomic trends impact socio-economic conditions, leading to financial challenges like inflation fluctuations, unstable Rupiah exchange rates, and a significant decline in the BI Rate affecting the competitiveness of Sharia financing against conventional loans. The study aims to analyze the relationship between macroeconomic factors and troubled financing in Indonesian BPRS. Employing Purposive Sampling across 20 provinces with the largest assets from 2019 to 2022, the Panel Granger Causality analysis indicates a connection between the exchange rate and NPF. However, economic growth, inflation, and BI Rate show no association with NPF. This suggests significant exchange rate exposure in the BPRS portfolio, necessitating cautious foreign exchange risk management through hedging, regular currency movement monitoring, and consideration of local currency financing policies. Sharia-compliant hedging via forward agreement contracts aligning with Fatwa DSN-MUI No.96/DSN-MUI/IV/2015, PBI No. 18/2/PBI/2016, and Opini DPS No. 17/26/DPS/XII/2015 on Sharia Hedging Plans should be implemented.

Keywords: Sharia People's Financing Bank, Macroeconomics, Troubled Financing

INTRODUCTION

The proliferation of Sharia People's Financing Banks (BPRS) in Indonesia signifies widespread community engagement in financing. However, several provinces grapple with financing issues. Notably, between 2019 and 2022, the Non-Performing Financing (NPF) of BPRS in Indonesia predominantly exceeded 5% (Hernawati & Puspasari, 2018), with some provinces even surpassing 10%. These provinces include Aceh, West Sumatra, Bangka Belitung, Riau, Riau Islands, West Java, Yogyakarta, East Java, Central Kalimantan, and South Kalimantan.

The economic landscape saw fluctuations during this period, notably in inflation rates and the Rupiah exchange value. Such volatility in inflation destabilized Indonesia's socio-economic conditions, contributing to financial challenges within the financing sector (Janvisloo et al., 2013; Louzis et al., 2012; Vatansever & Hepşen, 2013). The Rupiah experienced significant fluctuations, notably reaching Rp16,285.17 against the US Dollar in the first quarter of 2020. Moreover, a substantial decline in the BI Rate was observed from 2019 to 2022. This decline impacted the profit-sharing ratios of Sharia banks adversely, rendering Sharia financing products less competitive against declining conventional loan interest rates in Indonesia. Consequently, this situation significantly contributed to the financing issues faced by BPRS across the nation.

Economic growth in Indonesia also witnessed fluctuations, with particular provinces, including West Sumatra and Lampung, experiencing negative growth. These variations in economic performance further compounded the challenges faced by the financing sector and BPRS in particular. When economic activities surge, it boosts people's income, enabling them to meet obligations, thereby reducing credit risks or NPL. Louzis et al. (2012) research supports this, indicating a negative correlation between Non-Performing Loans and overall credit growth. Economic growth notably affects corporate credit risks; higher economic growth empowers companies to repay their creditors. This ability to meet obligations impacts the Non-Performing Loan ratio, reducing credit risks.

There are several previous studies related to this research. Economic growth signifies increased production of goods and services within a country over the long term. GDP growth indicates increased income for companies or individuals. During a recession, economic growth declines, impacting a company's income and causing financial difficulties, leading to defaults. Economic downturns indicate instability in prices, output, and unemployment levels. Companies' ability to pay debts rises with economic growth, consequently reducing NPF risks. Conversely, decreased GDP leads to reduced debtor capacity due to lower income, increasing credit risks (NPF) (Badar & Javid, 2013).

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Louzis et al. (2012) research indicates a negative correlation between NPF ratios and overall credit growth, predominantly affecting corporate credit risks. This suggests that when a country's economic growth rises, companies have the capability to repay creditor loans, impacting the Non-Performing Loan ratio and reducing credit risks. Based on previous research, it can be concluded that there exists a relationship between economic growth and NPF in Sharia People's Financing Banks in Indonesia. Therefore, the preliminary assumption is that there exists a link between economic growth and NPF in Sharia People's Financing Banks in Indonesia.

The causality relationship between inflation and Non-Performing Financing (NPF) Inflation entails continuous price increases within a specified time frame, affecting economic stability. It can discourage saving, encourage spending, and direct investments towards non-productive activities. Unstable inflation impacts socio-economic conditions, affecting macro and microeconomic conditions in Indonesia (Prastiwi, 2021). High inflation reduces people's purchasing power without an equivalent increase in wages, resulting in economic slowdown, reduced business profits, and impacting customers' repayment capacities. Late customer repayments increase troubled financing (Karim, 2015). Increased inflation can elevate problematic loans. Inflation's impact on banking occurs when high inflation raises prices. Increased spending inversely affects customers' ability to meet obligations, consequently increasing default rates (Prastiwi, 2021; Rosita & Musdholifah, 2018; Roza Linda, 2015; Tho'in & Prastiwi, 2019).

Research by Ardana (2018, 2019) shows that while inflation has a negative but insignificant effect on Non-Performing Financing, Vanni & Rokhman (2018) research indicates a positive but insignificant impact. Based on prior studies, it can be inferred that there is a connection between inflation and NPF in Sharia People's Financing Banks in Indonesia. Hence, the preliminary assumption is that there exists a relationship between inflation and NPF in Sharia People's Financing Banks in Indonesia.

The causality relationship between exchange rates and Non-Performing Financing (NPF) Exchange rate flexibility and inflation pose high uncertainty risks, necessitating exchange rate management to regulate inflation movements (Buffie et al., 2018). Hence, exchange rates contribute to problematic financing (Badar & Javid, 2013). The exchange rate represents the currency exchange level and influences customers' loan repayment capacities. Exchange rates shape customers' installment characteristics concerning economic activities. Indonesia primarily relies on imports. A weaker Rupiah against the US Dollar raises input prices and production costs. A depreciation in the Rupiah affects foreign currency loans, increasing foreign debt obligations due to depreciation. Increased obligations reduce borrowers' repayment capacities, leading to defaults and problematic financing (Prastiwi, 2021). According to prior research, a relationship exists between exchange rates and NPF in Sharia People's Financing Banks in Indonesia. Therefore, the preliminary assumption is that there exists a relationship between exchange rates and NPF in Sharia People's Financing Banks in Indonesia.

The causality relationship between BI Rate and NPF Generally, Bank Indonesia raises the BI Rate if future inflation is expected to exceed the set target. Conversely, Bank Indonesia decreases the BI Rate if future inflation is projected to fall below the established target (Siregar et al., 2020). Despite Sharia banks not using an interest-based system, interest rate fluctuations impact them. An increased BI Rate influences loan interest rates, steering conventional bank customers towards Sharia banks (Sri Herianingrum, 2020). Meanwhile, high demand for Sharia bank financing without adequate analysis leads to problematic or Non-Performing Financing (NPF). When the BI Rate increases, Sharia banks' profit-sharing ratios compete with increasing conventional loan interest rates, making Sharia financing products more competitive. Previous research indicates a relationship between the BI Rate and NPF in Sharia People's Financing Banks in Indonesia. Therefore, the preliminary assumption is that there exists a relationship between the BI Rate and NPF in Sharia People's Financing Banks in Indonesia.

Given existing gaps in prior research, specifically regarding theoretical gaps not aligning with the research's grand theory, this study adopts the Intermediary Theory. It views financial intermediation as the banking activity collecting surplus funds and redistributing them to borrowers (households, private entities, and governments). Additionally, employing the Liability Management Theory, it asserts that banks maintain minimum liquidity by establishing a substantial borrowing network from associates, call money, and other sources.

Furthermore, the inconsistencies in prior research findings also reveal gaps, leading this study to adopt a bidirectional approach. This approach aims to address complex issues raised within this research. As a continuation of previous research, employing a bidirectional approach using Panel Granger Causality is pivotal due to indications that NPL, inflation, and exchange rates have reciprocal relationships. This study focuses on Indonesian BPRS, covering 34 provinces from 2019 to 2022, analyzing the relationship between macroeconomic factors and troubled financing. Thus, this study seeks to analyze the relationship between macroeconomic factors and troubled financing in the Indonesian Sharia People's Financing Bank using a Panel Granger Causality approach.

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LITERATURE REVIEW

The Grand Theory primarily revolves around the concept of Financial Intermediation. This theory, initially developed by Jhon Gurley in 1956, emphasizes the crucial role of banking institutions as intermediaries in an economy, facilitating the flow of funds from surplus units to deficit units. It highlights the significance of financial intermediation to address information asymmetry between fund providers and users, thereby requiring intermediaries to cater to the needs of both parties (Bhatia & Khatkhate, 1975; Konstantakopoulou, 2023).

Moving to the Middle Theory, it delves into Management Liability, focusing on banks' efforts to procure non-traditional funds to meet credit demands profitably. This theory highlights the management of liabilities to finance operational and investment needs, discussing aspects like leverage and the active role of managers in crafting financial arrangements (Abou-El-Sood & El-Ansary, 2017).

The Applied Theory here revolves around Non-Performing Financing (NPF), addressing the risk associated with banking operations, particularly in the realm of problematic financing. It discusses how the inability of borrowers to repay or adhere to the agreed terms leads to NPF, impacting a bank's profitability and overall performance. The text details classifications of NPF based on different criteria, offering formulas and criteria for evaluating the quality of financing, and outlining factors influencing the rise of problematic financing, such as economic conditions and debtor-related issues (Ekananda, 2017; Louzis et al., 2012).

Inflation denotes a continual rise in prices (Abidemi & Abdul Mali, 2010; Bruno & Easterly, 1998), reflecting a weakening purchasing power and the depreciation of a nation's currency. Understanding inflation involves two main concepts: the overall price level and the general rate of price increase. Unstable inflation impacts societal economics and banking, notably elevating the risk of bad loans. Moreover, exchange rates, and the BI Rate play crucial roles in financing and credit risks (J. B. Abdullah, 2017; Aji et al., 2021; Tho'in & Prastiwi, 2019). Economic growth, the source of improved living standards, relies on classical and modern theories emphasizing output and aggregate supply (R. S. Abdullah & Nasirin, 2022; Konstantakopoulou, 2023; Louzis et al., 2012). While pivotal, it's insufficient to mitigate socio-economic disparities, requiring equitable income distribution as well.

Each theory provides a distinctive perspective on financial intermediation, risk management, and the impact of economic factors on banking operations. They collectively underscore the complexities and crucial roles of banks in maintaining stability, managing risks, and fostering economic growth.

There is a wealth of prior research that illuminates the intricate connections between economic growth, inflation, exchange rates, BI Rates, and NPF in Sharia People's Financing Banks in Indonesia. Economic growth, reflective of increased production and income, directly impacts companies' financial standing during downturns or recessions, altering their capacity to repay debts and affecting credit risks (Badar & Javid, 2013; Louzis et al., 2012). Similarly, inflation's continuous price escalations can weaken purchasing power, slow economies, and elevate credit risks, as highlighted by various studies (Ardana, 2018, 2019; Prastiwi, 2021; Rosita & Musdholifah, 2018; Roza Linda, 2015; Tho'in & Prastiwi, 2019; Vanni & Rokhman, 2018). Exchange rates, primarily influencing loan repayment capacities, are profoundly intertwined with input prices, production costs, and foreign debt obligations (Badar & Javid, 2013; Buffie et al., 2018; Prastiwi, 2021). The flexibility of the BI Rate, guided by inflation expectations, significantly influences interest rates, impacting the profitability of Sharia banks and, consequently, their NPF (Siregar et al., 2020; Sri Herianingrum, 2020). Previous research consistently suggests linkages between these economic variables and NPF in Sharia People's Financing Banks, emphasizing the preliminary assumption of their interrelation in Indonesia's banking landscape.

METODE PENELITIAN / *METHODS*

The research methodology was conducted from August 2022 to May 2023 and involved data from BPRS Indonesia accessed through the Financial Services Authority (OJK) website, Bank Indonesia (BI), and the Central Statistics Agency (BPS). This study employed a quantitative method with a population of 34 provinces in Indonesia. Sampling was done through purposive sampling based on characteristics relevant to the research objectives, resulting in a selection of 20 provinces with the largest BPRS assets. Data collection techniques included literature reviews and documentation from various sources related to the research variables, such as annual financial reports from relevant institutions obtained from the official OJK, BPS, and BI websites.

Data analysis utilized various methods, including stationarity tests for time series or panel data, the Dickey-Fuller test, determination of optimal lag length, stability tests, and determination of the optimum lag. Granger causality tests were employed to analyze the direction of causal relationships among variables (R. S. Abdullah & Nasirin, 2022; Chang et al., 2017; Ferreira, 2021; Nasirin et al., 2023). This study followed Granger causality logic, distinguishing unidirectional causality, feedback, and no dependence among variables.

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Overall, this methodology extensively relied on secondary data obtained from official sources and utilized diverse analytical techniques to support the validity of the research findings.

DISCUSSION

The causality test in this study aimed to establish cause-and-effect relationships among each variable. Specifically focused on macroeconomic indicators like Inflation, Exchange Rate (KURS), BI Rate, and Economic Growth concerning Non-Performing Financing (NPF) in Indonesian Sharia People's Financing Banks. The test was conducted at a 5% confidence level, and the results are presented in Table 1. The probability values hold significance; when they exceed 0.05, it denotes no causal relationship between variables. Analyzing the data processed through Granger causality in Eviews, the outcomes reveal several unidirectional causalities.

Tabel 1. Output Panel Granger Causality

No	Causality	Prob.	Sig.	Result
1	Inflasi – NPF	0,3835	0,05	Rejected
2	NPF – Inflasi	0,9984	0,05	Rejected
3	ETR – NPF	0,0110	0,05	Accepted
4	NPF – ETR	0,3083	0,05	Rejected
5	BI Rate –NPF	0,1383	0,05	Rejected
6	NPF – BI Rate	0,7946	0,05	Rejected
7	ECG – NPF	0,6930	0,05	Rejected
8	NPF – ECG	0,9951	0,05	Rejected

Source: Output Eviews 12

For instance, statistically, Inflation does not have a one-way relationship with NPF, and the same applies to NPF's influence on Inflation. However, there is a statistically significant one-way relationship between Exchange Rate and NPF, yet no significant relationship from NPF to Exchange Rate. The results also indicate no one-way causal links between BI Rate and NPF, Economic Growth and NPF, and their reverse directions. Consequently, it's concluded that there's no Granger-causal relationship between Macroeconomic Factors and NPF in Indonesian Sharia People's Financing Banks from 2019 to 2021. This indicates no unidirectional or bidirectional causality between these variables. The analysis demonstrates distinct causal relationships based on probability values and significance levels, confirming the absence of significant causal associations among these macroeconomic variables and NPF.

The research conducted on the relationship between inflation, exchange rates, BI Rate, economic growth, and Non-Performing Financing (NPF) in Sharia Rural Financing Banks in Indonesia has revealed intriguing findings. Inflation, denoting the general rise in prices, surprisingly did not exhibit a significant direct correlation with NPF in these banks. However, high inflation can adversely impact NPF by reducing the purchasing power of individuals and causing difficulties in loan repayments. Nevertheless, banks that implement stringent policies in lending, actively monitor risks, and maintain a well-diversified portfolio can sustain the quality of their financing despite inflationary fluctuations.

Likewise, the connection between exchange rates and NPF doesn't always manifest directly. Although fluctuations in the value of the rupiah against foreign currencies have limited influence on NPF in these banks, risk management concerning exchange rate exposure, particularly through hedging instruments, can mitigate its impact. Nonetheless, uncontrolled exposure to exchange rate risks can significantly affect NPF, especially if a majority of financing is conducted in foreign currencies.

Furthermore, the relationship between the BI Rate (benchmark interest rate) and NPF isn't consistently straightforward. While the BI Rate can affect financing costs and economic growth, micro-level factors such as internal risk management and customer risk profiles play a dominant role in influencing NPF in these banks. Responsiveness to BI Rate changes and effective management actions can aid in reducing NPF risks.

A robust and stable economic growth typically has a positive impact on NPF. However, micro-level factors like internal risk management and customer profiles wield more significant influence. Market segmentation and diversification of financing portfolios are pivotal strategies in reducing NPF risk by expanding the customer base and decreasing exposure to sector-specific risks. In conclusion, the quality of financing and NPF in Sharia Rural Financing Banks in Indonesia is more influenced by micro-level factors and internal policies than macro variables like inflation, exchange rates, BI Rate, or economic growth.

Given the interplay between macroeconomic variables like inflation, exchange rates, BI Rate, economic growth, and NPF within the context of BPRS in Indonesia, it sheds light on intriguing implications aligned with the theory of financial intermediation. This theory underscores the role of financial institutions, particularly banks, in facilitating the flow of funds from surplus units to deficit units.

Firstly, concerning risk management, financial intermediation theory emphasizes the crucial role of effective risk management within financial institutions (Bhatia & Khatkhate, 1975; Konstantakopoulou, 2023). Understanding how macroeconomic factors like inflation, exchange rates, BI Rate, and economic growth affect the flow of these funds helps comprehend the challenges BPRS faces in balancing the needs of both parties while ensuring efficient allocation of resources. While macroeconomic variables affect the operating environment of banks, effective risk management, including foreign exchange risk, interest rate risk, and credit risk management, significantly impacts loan quality (NPF). Resilience, in this context, pertains to a bank's ability to confront and manage these risks effectively.

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Secondly, the theory of management liability becomes relevant as it highlights the responsibility of bank management for loan quality (Abou-El-Sood & El-Ansary, 2017). Bank management holds responsibility for credit policies, risk monitoring, and investment decisions. Hence, adept management implements more cautious policies during macroeconomic fluctuations, such as risk reduction through portfolio diversification and prudent lending. Management Liability becomes pertinent concerning how BPRS management handles various liabilities and risks. This includes addressing non-traditional funding sources to meet credit demands while maintaining profitability. As these institutions navigate through the impacts of inflation, exchange rate fluctuations, and changes in economic growth, their liability management practices become crucial in sustaining financial stability and managing risks associated with NPF.

Lastly, concerning the resilience of BPRS Indonesia, understanding the significance of sound risk management and strategies to navigate macroeconomic fluctuations becomes pivotal. The bank's resilience to external changes (like inflation, sluggish economic growth, or exchange rate fluctuations) lies in its ability to implement intelligent internal policies, such as robust risk management, portfolio diversification, and responsiveness to external conditions. The capacity to manage risks astutely will assist the bank in remaining stable despite significant external changes.

There is a wealth of prior research that illuminates the intricate connections between economic growth, inflation, exchange rates, BI Rates, and NPF in Sharia People's Financing Banks in Indonesia. Economic growth, reflective of increased production and income, directly impacts companies' financial standing during downturns or recessions, altering their capacity to repay debts and affecting credit risks (Badar & Javid, 2013; Louzis et al., 2012). Similarly, inflation's continuous price escalations can weaken purchasing power, slow economies, and elevate credit risks, as highlighted by various studies (Ardana, 2018, 2019; Prastiwi, 2021; Rosita & Musdholifah, 2018; Roza Linda, 2015; Tho'in & Prastiwi, 2019; Vanni & Rokhman, 2018).

Exchange rates, primarily influencing loan repayment capacities, are profoundly intertwined with input prices, production costs, and foreign debt obligations (Badar & Javid, 2013; Buffie et al., 2018; Prastiwi, 2021). The flexibility of the BI Rate, guided by inflation expectations, significantly influences interest rates, impacting the profitability of Sharia banks and, consequently, their NPF (Siregar et al., 2020; Sri Herianingrum, 2020). Previous research consistently suggests linkages between these economic variables and NPF in Sharia People's Financing Banks, emphasizing the preliminary assumption of their interrelation in Indonesia's banking landscape.

Resiliency in BPRS, particularly within the Indonesian context, reflects the sector's capacity to withstand and adapt to various economic challenges while maintaining its essential role in community funding. The escalating presence of BPRS across Indonesia signifies a robust financial infrastructure supporting local communities. However, this growth hasn't been uniform across provinces, as some areas have encountered difficulties, evident in their Non-Performing Financing (NPF) ratios exceeding 5%, notably surpassing 10% in specific regions. These disparities in NPF levels indicate localized financial stress within the BPRS sector, which needs careful attention.

The study emphasizes that the resilience of BPRS institutions becomes crucial amid macroeconomic fluctuations impacting socio-economic conditions. Factors like inflation volatility, unstable Rupiah exchange rates, and substantial fluctuations in the BI Rate pose challenges, affecting the competitiveness of Sharia-compliant financing against conventional loans. The research endeavors to investigate the link between these macroeconomic elements and problematic financing within Indonesian BPRS. The findings from the Panel Granger Causality analysis reveal a tangible connection specifically between the exchange rate and NPF.

However, the study doesn't identify any substantial causal relationship between economic growth, inflation, or the BI Rate with NPF levels. This disparity highlights a significant exposure of BPRS portfolios to exchange rate fluctuations. Consequently, it underscores the immediate need for meticulous management of foreign exchange risks within BPRS operations. Mitigation strategies encompassing careful hedging practices, regular monitoring of currency movements, and a strategic consideration of policies pertaining to local currency financing become imperative to navigate these challenges effectively.

The recommendation for Sharia-compliant hedging using forward agreement contracts aligning with Fatwa DSN-MUI No.96/DSN-MUI/IV/2015, PBI No. 18/2/PBI/2016, and Opini DPS No. 17/26/DPS/XII/2015 on Sharia Hedging Plans emerges as a strategic step toward risk management. Implementing such practices in line with Sharia principles can provide a structured framework to safeguard BPRS against adverse currency fluctuations, fostering resilience within their financial operations.

CONCLUSION

Based on the findings, several conclusions and practical implications emerge, offering insights for theoretical and practical application as well as policy recommendations in managing Non-Performing Financing (NPF) within Bank Pembiayaan Rakyat Syariah

Indonesia. The research establishes that there's no causality between inflation, BI Rate, Economic Growth, and NPF within BPRS Indonesia. However, a causality exists between Exchange Rates and NPF, indicating its significant impact.

High inflation adversely affects NPF by reducing consumers' purchasing power and their ability to meet payment obligations. Exchange rate fluctuations can significantly impact NPF, especially for BPRS with significant exposure to foreign currency financing. BI Rate fluctuations can hinder economic growth and affect NPF by raising financing costs. Conversely, stable economic growth tends to positively impact NPF by improving borrowers' financial conditions.

BPRS should focus on effective risk management by monitoring economic factors to reduce NPF. Diversifying financing portfolios can minimize the risk of defaults. Managing liquidity is crucial for meeting payment obligations, requiring BPRS to ensure adequate funds for financing. Careful management of foreign exchange risk, such as hedging, is essential. Market segmentation strategies can expand BPRS's customer base and financing portfolios.

Enhancing financial literacy can reduce NPF by educating consumers on loan decisions. BPRS should adopt strong risk management practices and diversify financing portfolios to mitigate sector-specific economic fluctuations. Future research can expand on this study with updated data and methodologies, considering additional intervening or moderating variables. The study also serves as a reference for similar research, aiming to rectify any limitations present in this investigation.

In conclusion, the research provides valuable insights into managing NPF within BPRS Indonesia, highlighting the importance of risk management, diversification, financial literacy, and continued research for effective policy formulation and implementation.

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