

The Fund Placement and Loan Financing in Sharia Microfinance: Credit Risk Analysis (2022-2023)

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Submission Track:
Received: 05-04-2024
Final Revision: 05-05-2024
Available Online: 03-06-2024

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Abstract:

The purpose of this study is to analyse the credit risk associated with Sharia Microfinance Institutions (MMFIs) in Indonesia. In particular, the study examines the risk associated with fund placement and loan financing over the 2022-2023 period. A qualitative method with statistical analysis is employed to evaluate the relationship between fund placement (the independent variable) and loan financing (the dependent variable). The findings indicate a positive correlation between the two variables, with an increase in fund placement resulting in an increase in loan financing. The analysis also identified downward and upward trends in the Coefficient Adequacy Ratio (CAR) of BPRS, underscoring the significance of risk management with regard to fund placement and microfinance. A decline in the quality of financing could potentially impact liquidity and increase credit risk. This study indicates a negative and symmetrical relationship between NPL BPRS and economic growth in Central Java. However, further investigation is required to ascertain the relationship between NPL BPRS and economic growth in West Java. The findings may assist the OJK and BI in formulating policies to enhance financial stability and safeguard customer funds..

Keywords: *Fund Placements, Loan Financing, Credit Risk Analysis*

1 Introduction

The relationships between assets and loans disbursed by microfinance institutions (MFIs) between 2022 and 2023 are reflected in OJK data, which indicates that the intermediation functions of BPRs and BPRSs are still in good condition. The report also reveals that credit/financing and third-party funds (DPK) are still experiencing good growth. The assets of BPR and BPRS exhibited relatively stable growth of 7.76% (yoy), in alignment with the credit/financing growth of BPR and BPRS, which reached 9.79% (yoy). Furthermore, the deposition of BPR and BPRS also demonstrated stable growth of 9.11% (yoy) compared to

that of the previous year. Notably, there was a decline in the quality of credit/financing in BPRs and BPRSs, which indicates a risk that requires monitoring. In particular, the quality of loans/financing to BPRs and BPRSs exhibits a high risk.

Although the capital of the BPRS is still relatively robust, with a capital adequacy ratio (CAR) of 23.21%, this figure has decreased by 121 bps compared to that of the previous year. This decline in CAR was influenced by the growth of BPRS capital, which was slower than the growth of risk-weighted assets (ATMR) of BPRS. Although the OJK concluded that the CAR of the BPRS was sufficient to absorb potential risks, seven Bank Perkreditan Rakyat (BPR) institutions became insolvent, with all of them situated in Central Java. The 2023 quarterly report from the OJK indicates that in December 2023, the growth of BPRS assets slowed to 14.98% (year-on-year), compared to 18.15% (year-on-year) in the same period of the previous year.

In terms of spatial distribution, BPRS financing was concentrated in Java (74.85%) and Sumatra (16.06%). BPRS financing in Java is concentrated in West Java and Central Java, with Rp5.66 trillion and Rp2.98 trillion, respectively. Nevertheless, only 25 Baitul Maal wat Tamwil (BMT) in Central Java have been accredited by the Accreditation Board, indicating the potential for enhanced supervision and regulation of microfinance institutions in the region.

The objective of this article is to examine the relationship between the assets of microfinance institutions (MFIs) and their financing loans and to assess the implications of this relationship for the protection of customer funds. By elucidating this relationship, it is anticipated that more comprehensive insights can be attained regarding the influence of MFI operational activities, such as fund placement and loan disbursement, on credit risk and customer fund protection. The findings of this study are anticipated to inform the development of enhanced risk management policies and practices within MFIs, thereby enhancing customer safety and confidence in microfinance institutions.

2 Literature Review

The literature on credit risk analysis of microfinance institutions in Indonesia is a highly relevant topic in the context of microeconomics. To assess credit risk, it is necessary to consider a number of criteria and aspects. These assessment standards have become common in many financial institutions, including banks in Indonesia. One frequently employed approach is 5C and 7P analysis. The 5C analysis encompasses the following five criteria: character, capacity, capital, collateral, and condition of the borrower.¹ Furthermore, it is essential to assess the soundness of microfinance institutions, such as rural banks (BPRs), which represent the primary focus in this context. The evaluation of the soundness of BPRs is conducted by considering a number of important factors, including cap-

¹ I Isman and Ahmad Zainul Muttaqin, "Innovative Legal Modeling for Interdisciplinary Studies on Law and Economic Behavior," *Indonesian Journal of Islamic Economic Law* 1, no. 1 (December 7, 2023): 60–71, <https://journals2.ums.ac.id/index.php/ijoe/article/view/3437>.

ital, productive asset quality, management, profitability, and liquidity. This approach, known as the CAMEL Rating approach, is often used in such evaluations. The relative importance of each of these factors is determined by their influence on the viability of the BPR business. For instance, capital and earning asset quality are accorded the greatest weight, as they are of paramount importance in determining the financial and operational strength of a BPR.²

The review of credit risk analysis in microfinance institutions also emphasizes the significance of effective supervision and regulation. It is the responsibility of supervisory authorities, such as the Ministry of Cooperatives and the Financial Services Authority (OJK), to ensure that microfinance institutions adhere to set standards. With the implementation of rigorous supervision, it is anticipated that credit risk can be effectively managed, which will subsequently enhance public confidence in microfinance institutions and contribute to micro-economic growth in Indonesia.³

A systematic literature review was conducted to identify relevant studies on credit risk analysis in microfinance institutions in Indonesia. The focus was on case studies of fund placement and loans granted between 2022 and 2023.

First, research by Wasiaturrahma, Raditya Sukmana, and Ahmad Hudaifah (2020) on the subject of the “financial performance of rural banks in Indonesia” is presented. Two-Stage DEA Approach. This research analyses the financial performance of conventional and Islamic rural banks (BPRs) in Indonesia by employing the DEA (data envelopment analysis) approach. The findings indicate that both conventional and Islamic BPRs continue to exhibit inefficiencies in their intermediation roles but demonstrate efficiency in their production activities. The results of the Tobit analysis indicate that the efficiency of both types of BPRs is positively influenced by location and the capital adequacy ratio (CAR). This study provides a comprehensive analysis of the financial performance of BPRs in Indonesia, which is pertinent to understanding credit risk analysis in microfinance institutions.⁴

Second, research conducted by Angga Erlando, Feri Dwi Riyanto, and Someya Masakazu (2020), entitled "Financial Inclusion, Economic Growth, and Poverty Alleviation", from Eastern Indonesia provides insight into the relationships among financial inclusion, economic growth, and poverty alleviation in the eastern Indonesian context. This research examines the impact of financial

² Ahmad Imam Hambali and Aisha Bahaeldin Ebrahim Ali, “Social Funding Programs in Non-Depository Credit Cooperatives: A Perspective on Positive Law and Sharia Principles,” *Indonesian Journal of Islamic Economic Law* 1, no. 1 (December 7, 2023): 50–59, <https://journals2.ums.ac.id/index.php/ijoel/article/view/3439>.

³ Euis Amalia and Eltom Ishaq Osman Musa, “Economic Compatibility of Islamic Economy and Pancasila: Implications for the Postgraduate Curriculum,” *Indonesian Journal of Islamic Economic Law* 1, no. 1 (December 7, 2023): 11–22, <https://journals2.ums.ac.id/index.php/ijoel/article/view/3434>.

⁴ Wasiaturrahma et al., “Financial Performance of Rural Banks in Indonesia: A Two-Stage DEA Approach,” *Heliyon* 6, no. 7 (July 2020): e04390, <https://linkinghub.elsevier.com/retrieve/pii/S2405844020312342>.

inclusion on economic growth, poverty reduction, and income inequality in eastern Indonesia. This research employs two causality model approaches, the Toda–Yamamoto bivariate VAR and PVAR (panel vector autoregression) models, to investigate the relationships among financial inclusion, economic growth, poverty, and income inequality in eastern Indonesia. The findings offer insights into the relationship between financial inclusion and credit risk in the micro-finance sector.⁵

Third, the research of Wasiaturrahma, Shochrul Rohmatul Ajija, and Ahmad Hudaifah. (2020) "Breadth and Depth of Islamic Cooperatives: The present study addresses the following research question: "Do size, nonperforming finance, and grant matter?" The objective of this research is to assess the breadth, depth, and overall score of outreach by conducting a case study of several Islamic cooperatives in East Java. The findings indicate that the level of coverage was not particularly high but gradually increased from 2014 to 2018. Cooperatives with relatively small assets tend to have high outreach scores. This study offers substantial insight into the factors influencing the outreach of Islamic cooperatives, including risk factors such as size, poor credit performance, and grant-making.⁶

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⁵ Angga Erlando, Feri Dwi Riyanto, and Someya Masakazu, "Financial Inclusion, Economic Growth, and Poverty Alleviation: Evidence from Eastern Indonesia," *Heliyon* 6, no. 10 (October 2020): e05235, <https://linkinghub.elsevier.com/retrieve/pii/S2405844020320788>.

⁶ Wasiaturrahma et al., "Breadth and Depth Outreach of Islamic Cooperatives: Do Size, Non-Performing Finance, and Grant Matter?," *Heliyon* 6, no. 7 (July 2020): e04472, <https://linkinghub.elsevier.com/retrieve/pii/S2405844020313165>.

⁷ Pupun Saepul Rohman et al., "A Review on Literature of Islamic Microfinance from 2010-2020: Lesson for Practitioners and Future Directions," *Heliyon* 7, no. 12 (December 2021): e08549, <https://linkinghub.elsevier.com/retrieve/pii/S2405844021026529>.

3 Research Method

This study employs a qualitative approach complemented by statistical analyses to test research hypotheses pertaining to credit risk in Islamic microfinance institutions (MFIs) in Indonesia. The research design employed enables researchers to investigate in depth the relationship between fund placement and loan financing. A legal and economic analysis approach is employed to comprehend the regulatory framework that shapes risk management practices in microfinance institutions (MFIs), furnishing the requisite context for the assessment of the findings.

The analysis uses data obtained from official reports of the Financial Services Authority (OJK) and Bank Indonesia (BI), which are regarded as the main data sources for the analysis. This approach ensures the accuracy and reliability of the data used in the research, which is an essential step in the accurate and informative credit risk analysis process.

A quantitative data analysis technique was employed to gain deeper insights from the data collected. A descriptive approach was employed to analyse the distribution of research variables and temporal trends, thereby facilitating a more comprehensive understanding of the dynamics of microfinance institutions' financial performance over the period under study. In addition, inferential analyses, specifically linear regression and correlation analyses, were employed to test the research hypotheses and to explore the relationships between the variables under investigation.

The results of these analyses provide valuable insights into the relationship between fund placement and loan financing in Islamic MFIs in Indonesia, as well as the associated risk management implications. The findings can serve as a foundation for OJK and BI in formulating appropriate policies to enhance financial stability and customer fund protection in the microfinance sector. Furthermore, the methodological approach employed in this study can serve as a model for future research in the field of credit risk analysis in the microfinance sector.

4 Results and Discussion

The discussion on the credit risk analysis of microfinance institutions will focus on fund placements and financing loans during the 2022-2023 period. To assess the level of credit risk associated with fund placements and financing loans, it is necessary to consider the performance of microfinance institutions in these areas. Furthermore, the implications of this analysis for the protection of customer funds and the risk management policies adopted by microfinance institutions are outlined. Furthermore, the discussion will address the relevance of institutional accreditation and the regulatory implications for deposit protection. This is an important aspect of ensuring public safety and trust in microfinance institutions.

4.1 Credit Risk Analysis Based on Fund Placement and Financing Credit

The analysis of credit risk in microfinance institutions (MFIs) is a crucial operational issue because it provides insight into the financial soundness of the MFI and is closely related to the protection of customer funds. In the introduction, it was outlined that, in general, the relatively stable growth of credit/financing and third-party funds (DPK), followed by a decline in the quality of credit/financing, indicates a risk that needs to be monitored.

During the period under review, data from the OJK revealed an intriguing pattern in the relationship between the placements of funds and the loans provided by microfinance institutions in Indonesia. The following table presents descriptive data from the Financial Services Authority, which is used to compare fund placements and financing loans and to evaluate the level of credit risk.

Table 1. Fund Placements and Financ Loans 2022-2023

Items	Dec 2022	April 2023	Aug 2023	Dec 2023
Fund Placements	522.26	430.09	469.66	531.54
Financing Loans	945.63	984.70	1,001.79	1,007.73

The data presented indicate that placements exhibit temporal variation, with the highest value recorded in December 2023 at 531.54 and the lowest value recorded in April 2023 at 430.09. Conversely, the data on loans granted also exhibit a comparable pattern, albeit with a higher overall figure. This indicates that there were significant fluctuations in the disbursement and lending activities of microfinance institutions during this period.

To facilitate further analysis of the above data, the author presents it in the form of a scatter diagram, which allows the linearity between fund placements and financing loans for the period 2022-2023 to be projected.

Figure 1. Regression Analysis

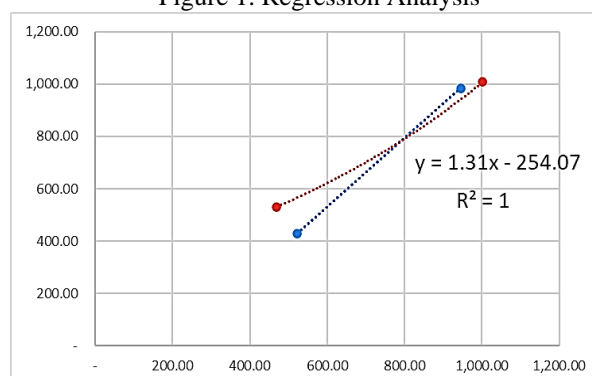


Figure 1 indicates that the regression equation is $y=1.31x-254.07$, where y represents the dependent variable (financing loans) and x represents the independent variable (fund placements). The coefficient of 1.3113 indicates that a one-unit increase in fund placements will result in a 1.3113-unit increase in loan disbursements. In other words, there is a positive correlation between fund placements and loan disbursements. The greater the amount of fund placement, the greater the amount of loans granted.

The intercept, which is represented by the value -254.07, represents the point of intersection between the y -axis (vertical axis) and the dependent variable (Financing Loans). This value is indicative of the financing loan outcome when the independent variable (Fund Placements) is set to zero. In this context, a negative value indicates that even in the absence of fund placements, lending still occurs. This may suggest that financial institutions have alternative sources of funding in addition to fund placements to provide loans.

Figure 1 at 800,000 on the x -axis (fund placements) indicates a crossing point between the y -axis variable (financing loans), which refers to the alternative funding sources owned by BPRS that do not only come from fund placements.

The equation allows us to conclude that there is a positive relationship between fund placements and financing loans. The greater the amount of fund placements, the greater the amount of loans provided.

By examining the ratio between these two variables, it is possible to gain insight into the efficiency of microfinance institutions in managing customer funds and channelling them back to the community. A higher ratio indicates greater potential for credit risk, particularly if the loans granted exceed the amount of available placements.

A review of OJK data and calculation of the capital adequacy ratio (CAR) for microfinance institutions (MFIs) in Indonesia during the 2022-2023 period indicate that the financial health of MFIs is stable, with CARs varying between 43.68% and 55.21%. This fluctuation is influenced by the placement of funds and microfinance provided during the period.

The substitution of fund placements and financing loans for core capital and risk-weighted assets indicates a decline in the CAR trend from December 2022 to April 2023, with a decrease from 55.21% to 43.68%. However, the subsequent period exhibits an upwards trajectory once more, with the CAR reaching 46.86% in August 2023 and 52.76% in December 2023. It is important to note that all CAR values exceed the minimum standard set by Bank Indonesia for MFIs. This suggests that MFIs have sufficient capital to cover potential losses and maintain financial stability.

Table 2. The Comparison of CAR.

Periods	CAR (%)
Dec-22	55.21
Apr-23	43.68
23-Aug	46.86

The preceding table indicates that fund placements and financing loans are crucial elements in the analysis of the potential for a decline in the capital adequacy ratio (CAR) in April 2023 due to a greater increase in microfinance disbursements compared to the increase in fund placements. Conversely, the increase in CAR in the following period is contingent upon an increase in placements and/or a decrease in microfinance disbursements. This indicates that, on average, microfinance institutions in Indonesia have employed effective management strategies with regard to fund placement and microfinance to maintain their capital adequacy ratio.

In conclusion, the degree of risk faced by microfinance institutions (MFIs) in Indonesia from 2022-2023 is low, as indicated by the capital adequacy ratio (CAR). Nevertheless, fluctuations in the CAR indicate the necessity for special attention to be paid to risk management in relation to fund placement and microfinance. Adequate fund placement is a crucial element in maintaining CAR stability and facilitating the uninterrupted distribution of microfinance, which, in turn, contributes to the growth and sustainability of MFIs.

In the context of the CAR trend of microfinance banking institutions (MFIs) in Indonesia from 2022-2023, which was associated with global uncertainty, it is necessary to consider several aspects. First, an adequate capital adequacy ratio (CAR) indicates that financial institutions (FIs) have sufficient capital to address potential losses that may arise due to global uncertainty. This indicates that FIs have robust financial resilience and are able to maintain stability in the face of global economic turbulence.

Nevertheless, fluctuations in CAR indicate that microfinance institutions (MFIs) must prioritize risk management with regard to fund placement and microfinance, particularly in the context of global uncertainty. The decline in CAR in April 2023 suggests a potential increase in credit risk due to a higher level of microfinance disbursements compared to the increase in fund placements. Consequently, it is of paramount importance to consider the diversification of funding sources and the effective management of risk associated with fund placement.

To effectively navigate the challenges posed by global uncertainty, micro banking institutions must enhance their risk management strategies. This entails conducting more comprehensive credit analysis, implementing regular monitoring of loan portfolio quality, and developing effective risk mitigation techniques. In this context, the collaboration and assistance of the government, Bank Indonesia, and OJK are of paramount importance. To enhance resilience, it is essential to expand access to funding to reinforce capital, reinforce risk management capacity through training and education, and develop innovative microfinance products and services to support MSMEs and low-income communities. This will enable them to better withstand the challenges posed by global uncertainty and continue to play a role in supporting inclusive economic growth.

4.2 Risk Management Policy and Its Implications for the Protection of Customer Funds

The observed decline in the quality of financing in BPRs, particularly in working capital, investment and consumptive financing, may have a number of implications for the protection of customer funds. To gain further insight, it is essential to first examine the general indicators of the BPRS during the 2022-2023 period:

Table 3 General indicators of the BPRS

Indikator	Nilai (%)	Parameter BI/OJK	Penjelasan
Capital Adequacy Ratio (CAR)	121	Minimum 8% (BI)	The BPRS capital is sufficiently resourced to withstand the impact of credit risk.
Return on Assets (ROA)	13	-	BPRS ROA is moderate, need to watch out for potential inefficiency or low credit quality.
Operating Expenses to Operating Income (BOPO)	23	-	It is evident that the BPRS BOPO is elevated, thus necessitating vigilance with regard to the potential for operational inefficiencies or an inadequate cost structure.
Non-Performing Loan Gross (NPF Gross)	58	-	The gross nonperforming loan ratio of the BPRS is exceedingly high, which is indicative of a considerable amount of nonperforming loans.
Loan to Deposit Ratio (FDR)	405	-	The BPRS FDR exhibits a high level of liquidity risk, as indicated by its elevated score.

A detailed examination of the BPRS general indicator data presented in Table 3 reveals several crucial points that warrant further investigation to assess the health and financial stability of the BPRS. First, the Capital Adequacy Ratio (CAR) of the BPRS is 121%, which is significantly greater than the minimum regulation set by Bank Indonesia (BI) of 8%. This indicates that the BPRS has a robust capital base to withstand credit risk. Second, the ROA return on assets value of 13% for the BPRS is included in the moderate category. This is due to

the relatively low ROA compared to the high CAR, which indicates the potential for financing inefficiency and operational inefficiency. Third, the ratio of operating expenses to operating income (BOPO) of 23% is classified as high, indicating that the BPRS has relatively large operating expenses compared to its income. This suggests the potential for operational inefficiencies or nonoptimal cost structures, which should be monitored. This could be achieved by controlling salary and administrative costs to increase the profit margin. Fourth, a gross nonperforming loan (NPF gross) value of 58% indicates a very high level of nonperforming loans. This is a significant indicator of credit risk for the BPRS. Fifth, the loan-to-deposit ratio (FDR) of the BPRS, which stands at 405%, indicates a high level of liquidity risk. This indicates that BPRS has a greater number of loans outstanding than third-party funds (DPK). If customers choose to withdraw and make interest payments, this will result in an increase in the aforementioned ratio. The BPRS must improve its deposit collection strategy and adopt a more prudent approach to managing its FDR to ensure the stability of its liquidity position.

Analysis of the general BPRS indicators revealed several indicators that indicate high risk, such as very high gross NPF and very high FDR. This may result in negative impacts such as decreased liquidity, customer distrust, and increased credit risk. BPRSs need to immediately take strategic and measurable steps to address these risks, such as:

The slowdown in the quality of financing in BPRs, particularly in working capital, investment and consumptive financing, may have several implications for the protection of customer funds, which need to be assessed from two policy perspectives, namely, Bank Indonesia's macroprudential and OJK's microprudential. First, the slowing growth of working capital and investment financing essentially indicates an increase in credit risk for BPRs. This is due to the potential increase in debtor customers who experience difficulties in repaying their loans. This suggests that OJK's supervisory role needs to be strengthened toward BPRs to ensure the implementation of selective lending policies and strengthen the monitoring of debtors.

Second, the deceleration in the growth of financing indicates a decline in the income of BPRs from interest in loans. This may have an adverse effect on the profitability of BPRs and their capacity to provide optimal services to customers. It is imperative that the OJK initiates educational programmes for BPRs with the objective of improving efficiency and diversifying their product and service portfolios to enhance profitability. This decrease in profitability is also corroborated by data from the OJK. If customers are made aware of the declining quality of financing and the declining profitability of BPRs, this may result in a reduction in their trust in BPRs. A lack of trust may prompt customers to withdraw their funds from the BPR, which could destabilize the BPR. It is imperative that the OJK intensify financial education initiatives for the general public and enhance consumer protection measures to bolster confidence in BPRs.

In parallel, the reduction in the quality of financing at the BPRS is also a decline in economic growth, as the BPRS plays an important role in providing

access to funding for micro, small, and medium enterprises (MSMEs). The observed decline in the quality of financing at the BPRS is indicative of a similar decline in economic growth. With the implementation of appropriate mitigation measures, it is anticipated that the adverse consequences of a decline in the quality of financing at BPRS on the safeguarding of customer funds can be mitigated to a certain extent.

By examining the financial soundness of Islamic People's Financing Banks (BPRSs) in Central Java between 2022 and 2023, it was found that there are noteworthy correlations between the financial health of the BPRS and the region's economic growth. The decline in the nonperforming loan (NPL) rate from 4.59% in 2022 to 3.84% in 2023 indicates an improvement in the financing quality of the BPRS. Nevertheless, the increasing trend of operating expenses to operating income (BOPO) from 20.12% to 21.35% over the same period suggests the potential inefficiency of BPRS operations.

A correlation analysis between the NPLs of the BPRS and economic growth in Central Java revealed a negative and symmetrical correlation between the two variables. This indicates that a decrease in NPLs, which is an indicator of good financing quality, correlates with an increase in economic growth. This symmetrical relationship indicates that both the decrease in NPLs and the increase in economic growth reinforce each other, thereby emphasizing the pivotal role of BPRSs with good financing quality in supporting economic growth in Central Java.

In contrast, the findings on the relationship between BPRS BOPO and economic growth are inconsistent, suggesting the potential for other factors to influence the relationship that was not considered in this study. Consequently, further analyses are required to gain a more in-depth understanding of the relationship between BOPOs and economic growth, including the potential influence of additional factors.

5 Conclusion

This study examines the impact of financing quality on the protection of customer funds in Islamic BPRSs in Indonesia. The study's key findings include the positive relationship between fund placement and loan disbursement in Indonesian microfinance institutions. The greater the fund placement is, the greater the loan disbursement. The ratio between fund placements and financing loans is an indicator of the potential credit risk faced by these institutions. Fluctuations in the coefficient adequacy ratio (CAR) of the BPRS indicate the need for special attention to be given to risk management in relation to fund placements and microfinance. BPRS general indicators indicate a high level of risk, as evidenced by the presence of very high gross nonperforming loans (NPLs) and high funding-to-deposit ratios (FDRs). This may result in a reduction in liquidity and an increase in credit risk. A decrease in nonperforming loans (NPLs) indicates an improvement in the quality of BPRS financing. However, the increase in operating expenses to operating income (BOPO) raises the potential for operational

inefficiency. The inverse and symmetrical relationship between the nonperforming loans of the BPRS and economic growth in Central Java serves to illustrate the significance of maintaining the quality of financing to support economic growth. It is recommended that the OJK strengthen its supervision of BPRs, that education be improved for BPRs and the public, and that further research be conducted to gain a deeper understanding of the relationship between the BOPO and economic growth.

Acknowledgement

The authors would like to express their profound gratitude to Dr. Isman, Head of the Master of Islamic Sharia Economics Study Program, for facilitating a discussion forum between the author and OJK Surakarta. His willingness to review and provide additional data, particularly in his capacity as editor of the Indonesian Journal of Islamic Economic Law, was invaluable in shaping the paper and formulating important perspectives regarding the standardization of customer fund protection in the Mikro BPRS.

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