



Financial Ratio Analysis and its Impact on Non Performing Financing in Indonesian Islamic Banks

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ABSTRACT

In Indonesia, substantial development has been experienced by Islamic banking, which has led to a considerable increase in Non-Performing Financing (NPF). Financing risks that cause problematic financing are contributed by internal factors within banks. Throughout the 2019–2023 observation horizon, the Capital Adequacy Ratio (CAR) serves as the proxy for capitalization in an investigation designed to evaluate how the strength of capitalization influences Sharia banking entities operating within Indonesia. operational effectiveness represented by The ratio of non-performing financing (NPF) is examined in relation to the financing-to-deposit ratio (FDR), net operating margin (NOM), profitability represented by return on assets (ROA), as well as the operating expense-to-operating revenue ratio (BOPO). The analysis concentrates on Islamic commercial banking institutions that remained listed under the supervision of the Financial Services Authority (OJK), consistently published yearly financial statements, and engaged in financing activities throughout the period covered by the investigation in Indonesia. For the purpose of data processing, panel-data regression procedures operated through E-Views are employed, whereas the investigation adopts a quantitative research approach. The results indicate that ROA, CAR, and NOM significantly reduce NPF in the Islamic banking industry. In contrast, BOPO and FDR significantly increase NPF. These findings show that inefficient operations and unequal financing distribution raise the likelihood of non-performing financing, while capital strengthening, enhanced profitability, and optimized operating margins can reduce NPF in Indonesian Islamic banks.

Keywords: Capital Sufficiency Ratio, Operational Effectiveness, Profit-Generating Capacity, Net Operational Margin, and Financing to Deposit Ratio

INTRODUCTION

Indonesia is becoming a prominent market in the swiftly expanding global Islamic finance sector. As the nation with the largest Muslim demographic, totaling 244.7 million (data.goodstats.id), Indonesia signifies a strong demand for Sharia-compliant financial product offerings. The Islamic Finance Development Report 2025 anticipates that worldwide Islamic financial assets will increase from US\$6 trillion in 2025 to US\$9.7 trillion by 2029, reflecting an average annual growth rate of 10%. This growth is evidenced in Indonesia through the rising assets of Sharia banking, substantial financing growth, and an expansion of Sharia-based financial networks and services. Factors contributing to this trend include

heightened public awareness of Islamic finance, favorable government regulations, and innovation in products (Yuliana and Listari, 2021). For individuals seeking financial services that comply with Sharia principles, this sector also functions as a driver of financial inclusion.

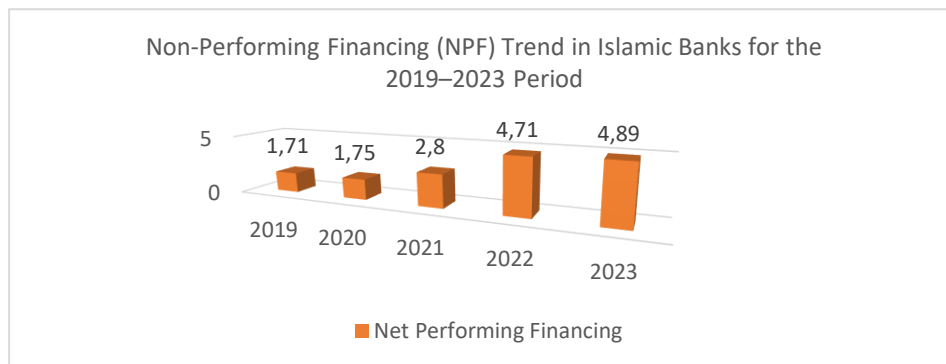


Figure 1. Non-Performing Financing (NPF) in Islamic Banks in Indonesia

As well as asset expansion, a significant obstacle is faced by Islamic banking, namely non-performing financing. As presented in Figure 1, a considerable increase in The ratio of impaired financing in Islamic banking entities has occurred. Higher NPF levels indicate that the financing portfolio carries greater risk. Therefore, proper NPF control is essential to maintain the financial soundness and operational sustainability of Islamic banks. Elevated NPF levels may weaken liquidity and reduce public confidence, which directly influences bank profitability and financial stability (Rafsanjani, 2019).

On a bank's NPF, five principal determinants are reported by several studies to exert a significant influence. These determinants consist of the institution's capacity to fulfill capital adequacy standards, control operational effectiveness, formulate financing allocation policies, produce earnings, and maximize its business margin (Ikhsan & Karyatni, 2023; Yuliana & Listari, 2021). For reducing the danger of non-performing financing, banks are considered to depend mainly on solid capitalization, expenditure efficiency, and sufficient profit generation. In contrast, the possibility of non-performing financing (NPF) can rise when financing administration is conducted too aggressively, as shown through a high Financing-to-Deposit Ratio (FDR), without consistently applying cautious banking principles.

Through mudharabah, musyarakah, and murabahah agreements, the rising expansion of Islamic financing within productive sectors requires Islamic banks to possess sufficient risk-control competence so that they do not become caught in troubled financing portfolios. A broader insight into the manner in which the Capital Adequacy Ratio (CAR) influences the observed phenomenon is expected to be generated through the findings of this investigation, Non-Performing Financing (NPF) within Indonesian Islamic commercial banking institutions throughout the 2019–2023 timeframe is examined in relation to the effects of Financing-to-Deposit Ratio (FDR), Net Operating Margin (NOM), profitability measured by Return on Assets (ROA), operational efficiency represented by BOPO, and the Capital Adequacy Ratio (CAR). Findings anticipated from the present investigation could serve as evaluative input for banking management in formulating financing risk-mitigation strategies, for regulatory institutions in developing supervisory frameworks for Islamic financial institutions, and for researchers as a basis for further expanding scholarly studies within the field of Sharia finance. The scholarly literature regarding Islamic bank risk control in Indonesia is also expected to be broadened by this research through the simultaneous examination of the five core variables affecting NPF.

LITERATURE REVIEW

On the Risk-Return Trade-Off concept, this study is grounded, which explains that higher

financing operations are connected with greater exposure to problematic financing risk. Within Islamic banking, a bank's aggressiveness level in distributing funds is represented by the Financing to Deposit Ratio (FDR), thereby expanding credit-risk exposure and possibly raising Non-Performing Financing (NPF). When financing growth is implemented without adequate risk-management mechanisms, the risk of problematic financing may increase, as shown by recent empirical studies, and this condition can influence the resilience of Sharia banking institutions (Ismail & Ariffin, 2020; Zahira & Sakdiah, 2025). This outcome is consistent with the Theory of Financial Intermediation, which asserts that lending activities risk is naturally embedded in the intermediary function of banks when channeling funds from surplus parties to deficit parties, and NPF can rise if such risk is not managed effectively.

In controlling financing risk, internal banking factors such as capital sufficiency and profit generation also hold an essential function. Through capital adequacy (CAR), prudence must be preserved by banks as a safeguard against possible losses, as emphasized in the Prudential Banking Principles. The role of CAR in sustaining stability and lowering the danger of problematic financing in Islamic banks has been proven to be significant by recent studies (Muhamad et al., 2022). In addition, Management's capacity to utilize resources efficiently and manage exposure to uncertainty is reflected through profitability indicators, namely Return on Assets (ROA) and Net Operating Margin (NOM). According to findings from previous investigations, an increase in earnings performance level is generally associated with stronger financing quality and a reduced the likelihood of problematic financing (NPF) risk (Yusuf et al., 2024).

On the other hand, financing quality is also determined importantly by operational effectiveness. According to the X-Efficiency Theory, the effectiveness of financing monitoring can be weakened and the risk of problematic financing can be increased by operational inefficiency, which is shown through a high BOPO ratio. According to recent studies, financing risk and NPF can increase as a result of higher operational expenditures and inefficiency within banks (Yusuf et al., 2024). Thus, the Impaired Financing (NPF) level in Islamic banks is collectively determined by the interaction of financing growth (FDR), capital strength (CAR), earnings performance (ROA and NOM), and operational effectiveness (BOPO).

CAR

CAR as capital strength indicator indicates the ability of a banking institution to distribute financial resources to sustain business operations and absorb potential losses, including underperforming financing (Ilyas, 2018). The level of capitalization further indicates the bank's responsibility in preserving monetary soundness, fulfilling supervisory requirements, and ensuring long-term organizational continuity. The CAR measurement is obtained by assessing the proportion of available capital against owned by the bank with the institution's risk-adjusted asset portfolio (Hakimul & Utomo, 2022).

$$CAR = \frac{\text{Capital}}{\text{Risk-Weighted Assets}} \times 100\%$$

An increase in the capitalization ratio, the stronger the banking entity's capability to withstand potential loss exposure caused by problematic financing without disrupting the sustainability of its organizational operations activities. Consequently, banking institutions with stronger capital sufficiency levels typically exhibit a reduced proportion of problematic financing (NPF), as sufficient financial reserves are available to withstand potential losses.

H1: CAR negatively influences NPF

Operational Performance Indicator (BOPO)

The effectiveness of banking operations reflects how well a bank manages its the extent to which business expenses are employed to create earnings (Tamin et al., 2022). This measure additionally serves as a key indicator of the efficiency with which a corporation leverages its

resources in pursuit of predetermined objectives (Scharfstein & Gaurf, 2013). By using the following equation, BOPO can be computed:

$$\text{BOPO} = \frac{\text{Operating cost}}{\text{Operating Income}} \times 100\%$$

The operational effectiveness of a bank is reflected by BOPO; a larger BOPO figure shows that a greater portion of expenses is used to obtain operating revenue. Weak supervision and poor risk assessment in the financing process are caused by inefficient banking operations, thereby raising the NPF level.

H2: BOPO positively influences Non-Performing Financing.

Profitability (ROA)

The capability of a company to obtain earnings is indicated by profitability. Profitability ratios, according to Suprianto et al. (2020), indicate how effectively a bank administers and utilizes its resources. Return on Assets (ROA) represents the profitability of a bank because it provides a comprehensive description of the returns generated through asset management and the effectiveness of banking administration (Awliya, 2022). Through the following formula, ROA can be calculated:

$$\text{ROA} = \frac{\text{Earning after tax}}{\text{Total Asset}} \times 100\%$$

As the Return on Assets (ROA) increases, the more robust the banking institution's capability becomes in administering its assets efficiently to generate earnings. Problematic financing is shown by a higher NPF. Therefore, The distributed financing is unable to generate the anticipated return. The bank's revenue can be affected by this condition, which ultimately decreases its ROA.

H3: ROA negatively influences NPF

Operating Profit Margin (NOM)

Rifai (2023) describes Net Operating Margin (NOM) as a financial measure reflecting the degree to which a banking institution's management is able to manage productive assets efficiently in producing net operational income, especially through profit-sharing activities. To strengthen the bank's capacity in maximizing all productive operations, such as distributing financing or placing funds in revenue-generating financial instruments, this ratio is required (Munandar, 2020). By applying the following equation, NOM can be computed:

$$\text{NOM} = \frac{\text{Net Operating Income}}{\text{Total Productive Assets}} \times 100\%$$

A greater NOM figure shows that management is more effective in creating earnings from the assets it controls, thereby increasing the bank's profitability and competitiveness within the industry. On the contrary, A heavier burden of problematic financing is indicated by a higher the level of problematic financing (NPF), thereby diminishing the banking institution's capacity to produce operating earnings from its income-generating assets. As a result, the Net Operating Margin (NOM) will decline when NPF rises, Because greater obstacles are encountered by the bank in producing net earnings from its assets.

H4: NOM negatively influences Non-Performing Financing.

Financing Distribution to Deposit Ratio (FDR)

A bank's liquidity status can be examined through the Financing-to-Deposit Ratio (FDR) through an assessment of its ability to fulfill depositor withdrawal demands by using available financing (Supriyono, 2017). In evaluating banking efficiency and financial condition, especially in Islamic banking, this ratio is essential because it represents the balance between fund collection and financing distribution (Rasyidin, 2016). Through the following formula, FDR can be calculated:

$$\text{FDR} = \frac{\text{Total Financing}}{\text{Total Deposit}} \times 100\%$$

That a larger portion of funds is being channeled by the bank as financing is indicated by a higher FDR. Without careful risk preparation, an excessively high FDR may raise the danger of problematic financing because it indicates aggressive financing distribution by the bank. H5: FDR positively influences Non-Performing Financing.

Problematic Financing Ratio (NPF)

The magnitude of financing difficulties is determined through the Non-Performing Financing (NPF) ratio because customers fail to meet the principal and repayment responsibilities that have been agreed upon (Rafsanjani, 2019). Weaknesses in financing eligibility assessment, monitoring after fund distribution, and collateral evaluation procedures are often reflected by this condition. According to Jaleka (2021), asset quality and risk-management performance in Islamic banks can be evaluated through the NPF ratio. A rise in problematic financing is signaled when the NPF value increases, which can result from weak financing-risk management, inadequate customer eligibility evaluation, and ineffective internal monitoring mechanisms. The probability of banking losses can be raised by this pattern, while customer trust may be reduced, cash flow disrupted, and overall profitability along with financial stability affected. Based on the study of Permana & Musthofa (2023), the NPF formula is written as follows:

$$\text{NPF} = \frac{\text{Total bad financing}}{\text{Total financing}} \times 100\%$$

METHODOLOGY

Through descriptive and verification procedures, a quantitative approach is applied in this study. The effect of The influence of Financing-to-Deposit Ratio, Net Operating Margin, earnings performance, operational effectiveness, and capital sufficiency on problematic financing within Indonesian Islamic banking institutions throughout the 2019–2023 observation period is examined as the main objective of this study. In this research, secondary data are employed, which are collected from the published yearly financial statements of individual banking institutions available on the respective Islamic banks' official portals and the Financial Services Authority (OJK) platform. Based on the survey findings, six Sharia banking institutions were chosen for the present investigation due to their superior transaction activity, diverse and competitive financial offerings, as well as their adherence to Islamic banking principles. Those banks were chosen to reflect the problematic financing (NPF) condition within Indonesia's Islamic banking sector. The institutions included in the analysis comprise Bank Muamalat, Bank Syariah Indonesia, Bank Mega Syariah, Bank Panin Dubai Syariah, BCA Syariah, and BJB Syariah are the banks analyzed in this study (dataindonesia.id).

For the purposes of this investigation, information was collected from the published financial statements of Sharia banking institutions operating under the supervision of the Financial Services Authority (OJK) are utilized. After the classical assumption test had been fulfilled, Data processing in this investigation was conducted through panel-data regression techniques with the assistance of EViews 12 software. Researchers are enabled by the panel-data regression approach for examining simultaneously assess variations in observed variables among several observational entities, particularly across cross-sectional dimensions and throughout a particular timeframe, namely time-series (Baltagi & Badi, 1975; Fitriani et al., 2024). Three diagnostic examinations were performed to identify the most suitable specification from among the common-effect, fixed-effect, and random-effect approaches (Basuki, 2021). Once the optimal model had been selected, the assessment proceeded employing t-tests, F-statistics, and R² values to evaluate the statistical significance and explanatory strength of the predictor variables toward NPF.

RESULT AND DISCUSSION

Test for Selecting the Regression Model

A probability value of 0.3852 is produced through the Chow Test, the estimation results confirm that the Common Effect Model becomes the proper model choice. Subsequently, the Lagrange Multiplier Test was applied to identify whether the Random Effect Model or the Common Effect Model should be selected was more appropriate. Referring to the LM statistical test results, the Breusch-Pagan probability value reaches 0.5927, showing that the Common Effect Model is the more suitable option for this research.

Hypothesis Test

Table 1. *t test*

Variable	Coefficient	Std. Error	t-statistic	Prob.
C	12.48303	1.673927	7.457333	0.0000
CAR	-0.156904	0.042336	-3.706127	0.0011
BOPO	0.192988	0.012065	15.99558	0.0000
ROA	-1.772083	0.128318	-13.81011	0.0000
NOM	0.044047	0.007964	5.530460	0.0000
FDR	-0.410863	0.109087	-3.766385	0.0009

Source: data processing by researcher, 2025

Table 1 presents that NPF is significantly affected by the capital strength ratio, operating cost-to-income ratio, asset return metric, net operating profit margin, and financing liquidity ratio as shown as indicated by a probability score lower than 0.05, the formulated hypothesis is thus validated. Therefore, capital sufficiency, operational effectiveness, financial performance, net operating profitability, and the financing-to-funding ratio are demonstrated to influence the magnitude of non-performing financing in Indonesian Islamic banking institutions, as indicated by NPF.

Referring to the F-test estimation results, the Prob (F-statistic) value of 0.000000 remains beneath the established significance criterion of 0.05. The simultaneous regression model's statistical meaningfulness is indicated by this value. The dependent variable is shown by these results to be significantly affected at the same time by the explanatory factors incorporated into the analytical framework. Hence, this model is recognized as adequate for assessing the associations between the observed factors. The coefficient of determination (R^2) attains a value of 0.9687, indicating that 96.87% of the fluctuations in NPF can be attributed to the Capital Adequacy Ratio (CAR), BOPO, Return on Assets (ROA), Net Operating Margin (NOM), and Financing-to-Deposit Ratio (FDR). Meanwhile, the residual 3.13% is influenced by additional determinants that are not incorporated within the estimated model.

The Influence of Capital Sufficiency Ratio (CAR) on Problematic Financing (NPF)

Referring to the T-test findings, the bank capital adequacy measure (CAR) is proven to have a significant negative influence on the volume of Non-Performing Financing (NPF). Thus, the proposed hypothesis stating that CAR has a negative impact on NPF within Islamic banking institutions is supported. The estimation results reveal that the degree of troubled financing becomes lower when the capital adequacy of a bank becomes higher. Potential losses caused by problematic financing can be absorbed by strong capital, so operational stability is not directly disturbed.

These findings are in agreement with the research of Isnaini et al. (2019), which concluded that CAR has a significant inverse impact on NPF. The important role of the capital ratio in preserving the soundness of financing portfolios in Islamic banking institutions is demonstrated by this result. Capital adequacy functions not merely as a shield against potential loss risk, but also as an indication of management prudence in managing financing risk.

During the 2019–2023 period, CAR values in this study generally displayed an upward

trend, even though several banks in the sample also recorded an increase in NPF levels. Nevertheless, the NPF level continued to stay within the regulatory safe limit, namely 5% or lower. This situation shows that although problematic financing experienced growth, adequate capital capacity was still held by banks to manage those risks.

Empirically, these results show that Islamic banking institutions in Indonesia have successfully adopted prudential banking principles effectively by reinforcing their capital structure. An effective risk cushion is provided by a high CAR, changes in non-performing financing are prevented from directly weakening banking financial stability. Therefore, improving CAR becomes an essential element in alleviating the level of non-performing financing and maintaining the integrity of the Islamic banking system.

The Influence of Operational Expense to Operational Income Ratio (BOPO) on Problematic Financing (NPF)

The t-test results show that Non-Performing Financing (NPF) is positively and significantly influenced by the ratio of Operating Costs to Operating Income (BOPO). Therefore, the hypothesis stating that BOPO positively affects the hypothesis stating that BOPO influences NPF in Islamic banks is therefore accepted. This result shows that the likelihood of increasing non-performing financing becomes higher when banking operational inefficiency rises. A high BOPO reflects a large amount of operating expenses that must be borne generated by the bank when compared to its earnings. As a result, the bank's capability to administer financing effectively becomes reduced.

This finding are consistent with the evidence reported by Isnaini et al. (2019), which revealed that NPF is significantly and positively affected by BOPO. The importance of operational effectiveness as a crucial determinant of financing portfolio soundness within Islamic banking institutions is confirmed by this result. When operational expenses cannot be controlled efficiently by banks, the resources that should be directed toward financing-risk monitoring and management become less optimal, so the possibility of problematic financing increases.

In this study, approximately 67% of the selected banks were found to have shown a continuous growth in BOPO ratios over the study period. Such growth was accompanied by elevated NPF levels, although they continued to remain within the regulatory safety threshold. This situation indicates a stable relationship between growing operational inefficiency and weakening financing quality. From an empirical perspective, the view that cost management and operational-effectiveness enhancement serve as important approaches for Islamic banking institutions in mitigating non-performing financing risk is reinforced by these findings. Resource utilization needs to be optimized by banks, and the effectiveness of operational management must be improved To preserve financial stability and sustain financing quality continuously.

The Influence of Asset Return Ratio (ROA) on Problematic Financing (NPF)

The findings of the T-test demonstrate that Non-Performing Financing (NPF) is negatively and significantly influenced by Return on Assets (ROA). Thus, the research hypothesis stating that ROA exerts a negative impact on NPF in Islamic banking institutions is supported. This finding means that the level of non-performing financing becomes lower when the earning capacity of a bank becomes higher. The bank's capability to maximize asset utilization in producing earnings and to demonstrate solid financial-management performance is reflected by a high ROA.

This outcome is in agreement with the study performed by Isnaini et al. (2019). which demonstrated that NPF is significantly and negatively affected by ROA. Profitability is therefore confirmed as a crucial measure in assessing asset quality and the efficiency of bank management. Better capability in selecting financing, reviewing customer feasibility, and

managing financing risk is generally possessed by banks with stronger profitability.

Over the course of the study period, the research data show that the average ROA value of banks experienced a decline, which was followed by a rise in NPF levels. A consistent connection between reduced profitability and deteriorating financing quality is shown by this condition. Decreased earnings may indicate weaker operational performance and lower effectiveness in asset administration, which ultimately increases the danger of problematic financing.

From an empirical perspective, the empirical evidence reveals that strong earnings performance not only reflects sound financial conditions but also contributes to safeguarding financing stability. Banking institutions with elevated ROA generally become more careful in channeling financing and increase the intensity of customer supervision and prepare sufficient allowance for possible financing losses. Therefore, ROA improvement is an important element in lowering Non-Performing Financing (NPF) levels and maintaining the soundness of Islamic banks.

The Influence of Net Operational Margin (NOM) on Problematic Financing (NPF)

The t-test results show that Non-Performing Financing (NPF) is positively and significantly influenced by Net Operating Margin (NOM). Therefore, the hypothesis stating that NOM positively affects NPF in Islamic banking institutions is supported. This finding suggests that the level of troubled financing risk financing becomes greater when the operating margin of a bank becomes higher. Good financing quality is not always reflected by a high margin; rather, it can indicate a less competitive pricing strategy or excessively aggressive financing growth.

The current finding is in agreement with the conclusions drawn by Kuswahariani et al. (2020), which revealed that NPF is significantly and positively affected by NOM. This indicates that greater financing risk may occur when higher operating margins are not supported by sufficient prudential principles. In banking practice, aggressive financing expansion is sometimes used by banks to achieve high profit margins, while customer eligibility still needs to be assessed carefully.

This study indicates that better financing quality does not always follow an increase in NOM. Conversely, greater risk-taking behavior by banks in channeling financing may be reflected by higher margins. When the main focus of banks is placed on raising margin income without appropriate risk governance, the likelihood of non-performing financing also increases. Empirically, the need to balance operating-margin administration with effective risk control is confirmed by these findings. Islamic banks must ensure that margin expansion is not derived from high-risk financing practices, but instead results from operational efficiency and rigorous financing quality assessment. Therefore, appropriate NOM management can assist in lowering NPF risk and maintaining long-term financial stability.

The Influence of Financing Distribution to Deposit Ratio (FDR) on Problematic Financing (NPF)

According to the t-test results, the Financing-to-Deposit Ratio (FDR) is found to exert a statistically significant inverse influence on Non-Performing Financing (NPF). Consequently, the proposed hypothesis stating that FDR has a negative impact on NPF within Islamic banking institutions is supported. These findings show that the level of problematic financing becomes lower when the amount of financing distributed by banks becomes higher. A high FDR indicates the capacity of banks to channel funds optimally while still applying prudential principles.

This finding is in line with the study by Ikhsan & Karyatni (2023), which suggests that when financing allocation is carried out effectively and in compliance with prudential standards, the likelihood of non-performing financing decreases. This reflects that the intermediation mechanism of banks has an essential role in preserving financing quality.

In this research, the capability of banks to administer third-party funds productively is also reflected by a high FDR. The potential for problematic financing can be reduced through selective financing distribution to customers who have strong business prospects and sufficient repayment capacity. Therefore, higher FDR does not necessarily indicate greater risk, provided that it is supported by proper risk management.

From an empirical perspective These results indicate that the financial intermediation role of Islamic banks can be enhanced as an efficient mechanism for reducing the level of Non-Performing Financing (NPF). Better asset quality is generally owned by banks that can distribute financing efficiently and precisely. Thus, the fundamental driver of sustaining financing stability and upholding the stability of Islamic banking institutions lies in efficient FDR administration reinforced by the consistent application of prudential principles.

CONCLUSION AND SUGGESTION

Several key results were obtained from the panel data econometric analysis, which explored the contribution of the Capital Adequacy Ratio (CAR), Return on Assets (ROA), Financing-to-Deposit Ratio (FDR), operational efficiency ratio (BOPO), and Net Operating Margin (NOM) on Non-Performing Financing (NPF) in Indonesian Islamic commercial banks throughout the 2019–2023 period. A significant negative influence of CAR on NPF is shown by the results, which means that stronger banking capital can lower the danger of problematic financing because banks possess greater capacity to absorb possible losses.

In addition, a significant negative influence on NPF is also shown by ROA. This indicates that financing quality can be improved when bank profitability becomes higher, because assets and financing risks can be managed more effectively by banks. A significant negative influence on NPF is also demonstrated by FDR, which means that effective financing allocation conducted in accordance with prudential banking standards can decrease the extent of problematic financing. Conversely, BOPO is found to exert a statistically significant positive influence on NPF, which demonstrates that rising inefficiencies in operational activities can increase exposure to financing risk. When operating expenditures are inadequately managed, the banking institution's effectiveness in supervising and controlling financing portfolios is reduced. In addition, NOM is also proven to have a positive and significant association with NPF, revealing that higher operating margins are not invariably linked to superior financing quality and may instead point to financing operations characterized by elevated risk activities with higher risk.

Altogether, the five independent factors simultaneously account for 96.87% of the variability in NPF ($R^2 = 0.968$), suggesting that they possess a significant explanatory capacity in determining the magnitude of problematic financing held by internal banking factors. This result reinforces the perspective that effective capital oversight, strong profitability performance, efficient operations, margin conditions, and sound financing allocation policies constitute fundamental factors in upholding financing quality. Therefore, comprehensive internal management needs to be strengthened by Islamic banks to reduce The risk of NPF, preserve financial stability, and encourage the sustainable growth of the Islamic banking industry in Indonesia. Future studies may broaden the research scope by adding several variables, both internal variables, such as risk-management quality and good corporate governance as internal variables, as well as macroeconomic determinants such as interest rates and inflation. Besides those variables, further research is also recommended to apply Structural Equation Modelling (SEM) analysis or a mixed-method approach. A more comprehensive understanding of the factors affecting NPF can be provided through this approach.

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