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ANALYSIS OF THE DETERMINANTS OF NON PERFORMING FINANCING (NPF) AT SHARIA COMMERCIAL BANKS IN INDONESIA

Deris Lazuardi[1], Muhammad Aswad[2], dan Rokhmat Subagiyo[3]
[1,2,3]Sayyid Ali Rahmatullah State Islamic University Tulungagung, Indonesia
derislazuardi95.dl@gmail.com[1], muhammadaswad@uinsatu.ac.id[2], dan rokhmatsubagyo@uinsatu.ac.id[3]

ABSTRACT

Sharia banking plays a strategic role in supporting national development to promote the distribution of prosperity among the people. This study aims to examine and analyze the influence of the Capital Adequacy Ratio (CAR), Return on Assets (ROA), and Operating Expenses to Operating Income (OEOI/BOPO) on Non-Performing Financing (NPF) at Sharia Commercial Banks in Indonesia in the 2021-2025 period, both partially and simultaneously. Using the Agency Theory perspective, this study evaluates the performance of management (the agent) in managing funds (the principal) to mitigate risk. The research approach is quantitative, utilizing secondary data sourced from the official annual reports of each bank. The analysis technique employed is panel data regression using the Common Effect Model (CEM), processed using RStudio software version 2026. The research sample consists of five sharia commercial banks selected through purposive sampling. The results show that, when analyzed partially, CAR has no influence on NPF, while ROA and OEOI/BOPO have a positive and significant influence on NPF. Simultaneously, CAR, ROA, and OEOI/BOPO have a significant influence on NPF, with an R-squared (R^2) value of 0.6831 and an adjusted R-squared of 0.6340, indicating that 63.40% of the variation in NPF can be explained by the model. The study's conclusion confirms that operational inefficiencies and risk-taking behavior by management in pursuit of profitability are the primary determinants that increase the risk of non-performing loans. Therefore, sharia banking management is expected to strengthen internal oversight and apply the principle of prudence to maintain the long-term stability of asset quality.

Keywords: *Non-Performing Financing, Capital Adequacy Ratio, Return on Assets, Operating Expenses to Operating Income, Sharia Commercial Banks.*

ABSTRAK

Perbankan syariah memiliki peran strategis dalam mendukung pembangunan nasional guna mendorong distribusi kesejahteraan bagi masyarakat. Penelitian ini bertujuan untuk menguji dan menganalisis pengaruh *Capital Adequacy Ratio (CAR), Return on Assets (ROA),* serta Beban Operasional terhadap Pendapatan Operasional (BOPO) terhadap *Non-Performing Financing (NPF)* pada Bank Umum Syariah di Indonesia selama periode 2021-2025, baik secara parsial maupun simultan. Menggunakan perspektif Teori Keagenan, penelitian ini mengevaluasi kinerja manajemen *(agen)* dalam mengelola dana *(prinsipal)* guna memitigasi risiko. Pendekatan penelitian adalah kuantitatif dengan data sekunder yang bersumber dari laporan tahunan resmi masing-masing bank. Teknik analisis yang digunakan adalah regresi data panel dengan *Common Effect Model (CEM)* yang diolah melalui software RStudio versi 2026. Sampel penelitian terdiri atas lima Bank Umum Syariah yang dipilih melalui teknik *purposive sampling*. Hasil penelitian menunjukkan bahwa secara parsial, CAR tidak berpengaruh terhadap NPF, sementara ROA dan BOPO berpengaruh positif dan signifikan terhadap NPF. Secara simultan, CAR, ROA, dan BOPO berpengaruh signifikan terhadap NPF dengan nilai *R-squared* (R^2) sebesar 0.6831 dan *Adjusted R-squared* sebesar 0.6340, yang mengindikasikan bahwa 63.40% variasi NPF dapat dijelaskan oleh model. Kesimpulan penelitian menegaskan bahwa inefisiensi operasional dan perilaku pengambilan risiko oleh manajemen dalam mengejar profitabilitas merupakan determinan utama yang meningkatkan risiko pembiayaan bermasalah. Oleh karena itu, manajemen perbankan syariah diharapkan memperkuat pengawasan internal dan menerapkan prinsip kehati-hatian guna menjaga stabilitas kualitas aset jangka panjang.

Kata Kunci: Non-Performing Financing, Capital Adequacy Ratio, Return on Assets, Biaya Operasional terhadap Pendapatan Operasional, Bank Umum Syariah.

INTRODUCTION

Based on the principles of Islamic Sharia, sharia banking is of great importance to the global economy. Meanwhile, Non-Performing Financing (NPF), often referred to as non-performing financing, is a major problem for this industry.[1] From an operational perspective, there are two types of banking institutions: Sharia banks and conventional banks.[2] Meanwhile, according to Law No. 21 of 2008 on Sharia Banking, there are three types of sharia banking institutions in Indonesia: Sharia Microfinance Banks, Sharia Commercial Banks, and Sharia Business Units.[3]

One of the most important factors in ensuring the smooth functioning of the economy is the role of banks as financial intermediaries.[4] Meanwhile, one of the government's initiatives to boost economic growth is to expand and improve the

[1] Maryuni Afivi and Anggun Okta Fitri, "Analisis Faktor-Faktor yang Mempengaruhi Non-Performing Financing (NPF) pada Perbankan Syariah," *JIIC: Jurnal Intelek Insan Cendikia.* 2, no. 5. (2025): 8697-8707.

[2] Alda fildza Amima and Rais Sani Muharrami, "The Effect of Capital Ratios, Credit Risk, and Inflation on Liquidity in Indonesian Islamic Commercial Banks," *Journal of Applied Economics in Developing Countries.* 10, no. 1. (2025): 55-64.

[3] Yustika Febi Larasati and Nafis Irkhami, "Financing to Deposit Ratio, Dana Pihak Ketiga, Modal Sendiri, dan Tingkat Bagi Hasil terhadap Profitabilitas Bank Umum Syariah di Indonesia: Peran Jumlah Pembiayaan sebagai Variabel Moderasi," *Journal of Accounting and Digital Finance.* 3, no. 3. (2023): 182-183.

[4] Feby Aulia Amanda, Muhammad Yafiz, and Tuti Anggraini, "Pengaruh Tingkat Bagi Hasil, Financing to Deposit Ratio (FDR) dan Inflasi terhadap Deposito Mudharabah Perbankan Syariah," *Jurnal Tabarru' : Islamic Banking and Finance.* 7, no. 1. (2024): 43.

performance of the banking sector.[5] This demonstrates just how important the banking sector is to a country's economic stability and growth, and to ensure that banking institutions can operate optimally, it is essential to maintain their performance and financial health.[6] The public's desire for a different banking system is reflected in the proliferation of sharia banks in Indonesia.[7]

Credit risk, often referred to as financial risk, is one of the risks faced by sharia banks.[8] A bank's financial performance is an analysis that shows the operational results the bank has achieved, focusing on the effective and efficient use of its resources, the results of which can be utilized by relevant stakeholders.[9] A significant issue for both conventional and sharia banks is non-performing financing. The circumstances leading to an increase in NPF primarily affect profit-sharing banks. Non-performing financing is more common in sharia banks than in conventional banks.[10]

The term Non-Performing Loan (NPL) is used by conventional banks, while Non-Performing Financing (NPF) is used by sharia banks; these terms describe a situation in which a debt or financing payment commitment is at risk of default or is not fulfilled properly, potentially resulting in a loss.[11] Non-performing financing

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[5] Aniesatun Nurul Aliefah, "Pengaruh Inflasi, Tingkat Suku Bunga, Nilai Tukar, PDB, Bagi Hasil terhadap Deposito Mudharabah Bank Syariah Bukopin," *LABATILA: Jurnal Ilmu Ekonomi Islam.* 05, no. 01. (2021): 46.

[6] Eka Sulistiyana, Gunarianto, and Survial, "Profitabilitas dan Risiko Bank: Perspektif Mediasi Capital Adequacy Ratio pada Industri Perbankan Indonesia," *Jurnal PETA.* 10, no. 2. (2025): 284.

[7] Asma' Munifatussa'idah, "Determinants Non-Performing Financing (NPF) in Indonesia Islamic Banks," *EQUILIBRIUM: Jurnal Ekonomi Syariah.* 8, no. 2. (2020): 255-274.

[8] Cyntia Ikramina and Puji Sucia Sukmaningrum, "Macroeconomic Factors on Non-Performing Financing in Indonesian Islamic Bank: Error Correction Model Approach," *JEBIS: Jurnal Ekonomi dan Bisnis Islam.* 7, no. 1. (2021): 34-50.

[9] Syariful A'laa and Fatihatus Sahliyah, "Pengaruh Ukuran Aset, Equity to Total Assets, dan Capital Adequacy Ratio terhadap Kinerja Keuangan Bank Umum Syariah," *NISBAH: Jurnal Perbankan Syariah.* 11, no. 1. (2025): 65.

[10] Rifadli D. Kadir, Sri Langgeng Ratnasari, and Muhamad Abduh, "What Drives Non Performing Financing? Evidence from Islamic Rural Banks in Indonesia during Covid-19," *IKONOMIKA: Jurnal Ekonomi dan Bisnis Islam.* 6, no. 2. (2021): 207-218.

[11] Isna 'Ainunnaja and Eka Wahyu Hestya Budianto, "The Effect of Ziswaf Fund Receipts, ROE, GWM on NPF Gross with Firm Size as Moderating Variable in Islamic Banking in Indonesia Period 2018-2023," *Balance: Journal of Islamic Accounting.* 05, no. 02. (2024): 163.

classified as substandard, doubtful, and loss indicates poor financial health. In addition to affecting specific banks, a high percentage of NPF jeopardizes a country's economic stability.[12] Meanwhile, the percentage of loans with a repayment probability of 3 to 5 (substandard, doubtful, or non-performing) relative to the total amount of loans extended by the bank is known as the gross NPF. In this study, the NPF used is the gross NPF. Financially, the gross NPF is the percentage of all loans considered to be in default or unable to be repaid according to the terms of the original contract. Loans, investments, and other financial products are all included in financing.[13]

Meanwhile, the Capital Adequacy Ratio (CAR) is a measure of the amount of capital a bank must maintain.[14] Meanwhile, Return on Assets (ROA) is a crucial metric for evaluating the ability of sharia commercial banks to maximize their assets to generate profits, and is often used as a benchmark for financial health.[15] On the other hand, the operational efficiency ratio, also known as Operating Expenses to Operating Income (OEOI/BOPO) in Indonesian, is a ratio that measures how well a bank performs its operational tasks.[16]

Another study was conducted by Aldi Setiadi in 2024, titled "Determinan Non-Performing Financing (NPF) pada Bank Umum Syariah di Indonesia (Periode

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[12] Sophis Listy Melati et al., "How Does Equity Financing Impact Non-Performing Financing? Evidence from Indonesia," *Global Review of Islamic Economics and Business.* 12, no. 2. (2024): 93-106.

[13] Puteri Nurhafizah Nazwa et al., "Pengaruh CAR dan FDR terhadap NPF pada Bank Muamalat Periode 2015-2022," *Ribhuna : Jurnal Keuangan dan Perbankan Syariah.* 3, no. 2. (2024): 73.

[14] Hunafa Ainun Nadlira, Ade Banani, and Rio Dhani Laksana, "Analisis Pengaruh Intellectual Capital dan Rasio Keuangan terhadap Kinerja Keuangan Bank Umum Syariah di Indonesia (Studi Empiris pada Bank Umum Syariah yang Terdaftar di Otoritas Jasa Keuangan Periode 2014-2019)," *Indonesian Journal of Islamic Business and Economics.* 04, no. 01. (2022): 22.

[15] Bintang Kartika, Sri Winarsih, and Yudhistira Ardana, "Kinerja Bank Syariah Indonesia: Analisis Pengaruh NPF, BOPO, dan CAR Tahun 2015-2024," *Journal of Artificial Intelligence and Digital Business (RIGGS).* 4, no. 2. (2025): 291-299.

[16] Duma Rahel Situmorang et al., "Analysis of the Influence of Loan to Deposit Ratio, Capital Adequacy Ratio, Non-Performing Loan, Operational Efficiency Ratio, and Total Asset Turnover on Return on Asset of Commercial Bank Listed on the Indonesian Stock Exchange Period 2019 - 2023," *Jurnal Ilmiah AccUsi.* 6, no. 1. (2024): 70.

2014-2023)." The results of his study indicate that "several internal factors, such as FDR, CAR, ROA, and OEOI/BOPO, as well as external factors such as inflation and exchange rates, also have a significant influence on NPF, therefore, sharia banks must be more vigilant and cautious in formulating policies to address the occurrence of NPF."[17] Another study was conducted by Syahrifa Dwi Fitri and Jaka Sriyana in 2023, titled "Analisis Faktor-Faktor yang Memengaruhi Tingkat Non-Performing Financing (NPF) di Bank Umum Syariah Indonesia Periode 2015-2021." The results of the study indicate that "in the long term, the asset variable has a negative and significant influence, while the CAR variable has a positive and significant influence on NPF at Sharia Commercial Banks. Meanwhile, FDR and OEOI/BOPO have no significant influence in either the long or short term."[18]

Meanwhile, a study conducted by Natasyanurul Fatimah and Khairina Nur Izzaty in 2022, titled "Analisis Pengaruh Faktor Internal dan Faktor Eksternal terhadap Non Performing Financing (NPF) pada Bank Umum Syariah di Indonesia." Based on the test results, it was shown that "FDR, CAR, inflation, and the BI Rate have no influence on NPF, but OEOI/BOPO and the exchange rate have a positive and significant influence on Non-Performing Financing (NPF)."[19] Meanwhile, another study was conducted by Indrajaya in 2019, titled "Determinan Non-Performing Financing pada Bank Umum Syariah di Indonesia." The results of this study showed that "the CAR variable has a significant negative influence on NPF. Meanwhile, FDR, OEOI/BOPO, the exchange rate, inflation, and GDP have no influence on NPF at sharia commercial banks in Indonesia."[20] Meanwhile, another study was conducted by Nyoto Ahmad Syaifudin et al. in 2025, titled

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[17] Aldi Setiadi, "Determinan Non-Performing Financing (NPF) pada Bank Umum Syariah di Indonesia (Periode 2014-2023)." (2024).

[18] Syahrifa Dwi Fitri and Jaka Sriyana, "Analisis Faktor-Faktor yang Memengaruhi Tingkat Non-Performing Financing (NPF) di Bank Umum Syariah Indonesia Periode 2015-2021," *Jurnal Informatika Ekonomi Bisnis.* 5, (2023): 232-239.

[19] Natasyanurul Fatimah and Khairina Nur Izzaty, "Analisis Pengaruh Faktor Internal dan Faktor Eksternal terhadap Non Performing Financing (NPF) pada Bank Umum Syariah di Indonesia," *JIEF : Journal of Islamic Economics and Finance.* 2, no. 2. (2022): 51.

[20] Indrajaya, "Determinan Non-Performing Financing pada Bank Umum Syariah di Indonesia," *Jurnal Ekonomi dan Bisnis Islam.* 5, no. 1. (2019): 68.

"Pengaruh Inflasi, Financing to Deposit Ratio (FDR), Capital Adequacy Ratio (CAR), dan Biaya Operasional terhadap Pendapatan Operasional (BOPO) terhadap Non-Performing Financing (NPF) Perbankan Syariah di Indonesia 2021-2024." The study's findings revealed that "in a partial analysis, inflation has a negative and significant influence on NPF. Similarly, CAR also has a negative and significant influence on NPF. However, FDR does not show a significant influence on NPF, although the direction of the relationship is negative. Meanwhile, OEOI/BOPO does not have a significant influence on NPF. This study provides insights into the factors that influence the quality of financing in Indonesia's sharia banking sector."[21]

This phenomenon of rising NPF can be examined through the lens of Agency Theory. Meanwhile, in banking relationships, customers act as principals who entrust their funds, while banks serve as agents who manage those funds. Conflicts of interest arise when the agent is unable to operate efficiently or fails to mitigate risks, which directly threatens the security of the principal's funds. In this context, CAR, ROA, and OEOI/BOPO serve as control mechanisms for the agent to demonstrate compliance with the principles of prudential banking. Meanwhile, Jensen and Meckling formulated agency theory by defining the interaction between the principal and the agent in carrying out their activities. The agent is authorized by the principal to conduct business. Additionally, the principal supervises the agent to ensure the agent remains focused on achieving the principal's objectives.[22]

Although numerous studies have been conducted on the determinants of NPF, there remain inconsistencies in the results of previous studies. These differing findings indicate that NPF dynamics are significantly influenced by the observation period and evolving economic conditions. The novelty of this study lies in its use

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[21] Nyoto Ahmad Syaifudin, Arista Fauzi Kartika Sari, and Ahsani Taqwiem, "Pengaruh Inflasi, Financing to Deposit Ratio (FDR), Capital Adequacy Ratio (CAR), dan Biaya Operasional terhadap Pendapatan Operasional (BOPO) terhadap Non-Performing Financing (NPF) Perbankan Syariah di Indonesia 2021-2024," *Warta Ekonomi.* 8, no. 2. (2024): 30.

[22] Rifqi Muhammad, Ahsin Suluki, and Peni Nugraheni, "Internal Factors and Non-Performing Financing in Indonesian Islamic Rural Banks," *Cogent Business and Management.* 7, no. 1. (2020): 1-12.

of a recent observation period, specifically from 2021 to 2025. This period is particularly crucial because it encompasses the post-pandemic economic recovery phase and the adaptation of sharia banking to dynamic global economic fluctuations.

Based on the above discussion, the researcher has chosen the topic titled **"Analysis of the Determinants of Non-Performing Financing (NPF) at Sharia Commercial Banks in Indonesia"** with the following research questions: 1). Does the Capital Adequacy Ratio have a partial influence on Non-Performing Financing at Sharia Commercial Banks in Indonesia in the 2021-2025 period? 2). Does Return on Assets have a partial influence on Non-Performing Financing at Sharia Commercial Banks in Indonesia in the 2021-2025 period? 3). Does Operating Expenses to Operating Income have a partial influence on Non-Performing Financing at Sharia Commercial Banks in Indonesia in the 2021-2025 period? 4). Do CAR, ROA, and OEOI/BOPO simultaneously influence NPF at Sharia Commercial Banks in Indonesia in the period 2021-2025?

To integrate the theoretical framework of agency theory with the latest empirical data, this study aims to test and analyze the influence of the Capital Adequacy Ratio (CAR), Return on Assets (ROA), and Operating Expenses to Operating Income (OEOI/BOPO) on Non-Performing Financing (NPF) at Sharia Commercial Banks in Indonesia in the 2021-2025 period, both partially and simultaneously. Through this analysis, it is hoped that the study will provide relevant evidence regarding the determinants of financing quality amid a dynamic economic landscape and serve as a practical reference for sharia banking risk management in Indonesia.

LITERATURE REVIEW

1. Agency Theory

According to Hamdani in 2016, agency theory describes the contractual relationship between the principal (owner) and the agent, who performs key functions within a business. Under this arrangement, the agent is required to act in the principal's best interests and make sound judgments. Meanwhile, sharia banks manage clients' (principals') finances as agents through various financing arrangements, including profit-sharing financing.[23] Meanwhile, Jenses and Meckling, in Azizah (2019), state that the principal is the party that assigns tasks to the agent to be carried out on their behalf. Managing the business is the agent's responsibility. Both the principal and the agent may define their respective responsibilities and rights. The company's operations may be facilitated and funded by the principal.[24]

The fundamental concept of agency theory explains that management, as the party entrusted with authority (the agent), and investors, as the party granting authority, have a cooperative relationship. Customers' interest in investing their money and the rate of return on equity are significantly influenced by the rapid growth of sharia banking. However, this growth can give rise to conflicts of interest between clients (principals) and sharia banks (agents).[25]

2. Non-Performing Financing

One of the key indicators used to evaluate the success of bank intermediation is Non-Performing Financing (NPF).[26] Meanwhile, according to Mutiah, in 2020, non-performing financing referred to the disbursement of funds by financial institutions, such as sharia banks, in situations where customer payments involved issues such as bad debt, borrowers failing to meet their obligations, and late

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[23] Siska Dentina Pasaribu, Mey Wulandari Simanullang, and Adelsiza Zenoni Harianja, "Pengaruh Pembiayaan Bagi Hasil (PBF) terhadap Risiko Pembiayaan (NPF) dengan Efisiensi Operasional (BOPO) sebagai Variabel Moderasi pada Bank Syariah di Indonesia," *Jurnal Ilmu Bisnis dan Ekonomi Islam.* 2, no. 2. (2025): 64.

[24] Ira Tusiyani and Fetria Eka Yudiana, "Pengaruh Dana Pihak Ketiga dan Non Performing Financing (NPF) terhadap Profitabilitas dengan Pembiayaan Bagi Hasil sebagai Variabel Intervening," *WADIAH: Jurnal Perbankan Syariah.* 8, no. 2. (2024): 348.

[25] Adhalia Pratiwi and Nana Diana, "Pengaruh CAR, NPF, dan BOPO terhadap Profitabilitas pada Bank Umum Syariah di Indonesia Tahun 2015-2019," *JIAI (Jurnal Ilmiah Akuntansi Indonesia).* 6, no. 1. (2021): 59.

[26] Nazwa Putri Ramadini and Nafisah Ruhana, "Analysis of the Effect of FDR, BOPO, Inflation & GDP on Non-Performing Financing (NPF) in Islamic Windows Bank for the 2018-2023 Period," *Journal of Applied Islamic Economics and Finance.* 5, no. 3. (2025): 72.

installment payments. Both parties suffered losses as a result.[27] The NPF used in this study is the gross NPF, where gross Non-Performing Financing (NPF) compares non-performing financing to total credit before deducting the allowance for impairment losses.[28]

Meanwhile, Bank Indonesia categorizes these non-performing credits into several groups, including non-performing, doubtful, and substandard. To keep the NPF below the required maximum limit of 5%, banks must actively manage these loans.[29] High credit risk can lead to banking instability. The probability of bank failure increases as this risk rises. The Indonesia Financial Services Authority defines a healthy NPF ratio as less than 5% of total financing.[30]

Gross NPF Formula:

$$NPF\ Gross = \frac{\text{Total Non Performing Financing}}{\text{Total Financing}} \text{ X } 100\%$$

3. Capital Adequacy Ratio

Mia Lasmi in 2013 defined the Capital Adequacy Ratio (CAR) as a bank's ability to cover potential losses from credit or securities trading with its current capital.[31] A bank's ability to manage credit risk or higher-risk earning assets

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[27] Fathur Imam Fadhilah and Radia Purbayati, "The Influence of Internal and External Factors on the Level of Non-Performing Financing in Sharia Banks in Indonesia for the Period 2014-2023," *Indonesian Journal of Economics and Management.* 5, no. 2. (2025): 193.

[28] Dimas Sauqi Mubarok and Alvien Nur Amalia, "Analisis Pengaruh Capital Adequacy Ratio, Dana Pihak Ketiga, Financing to Deposit Ratio dan Non-Performing Financing terhadap Return on Asset Bank Umum Syariah Periode 2014 - 2017," *Journal of Accounting, Management and Islamic Economics.* 01, no. 02. (2023): 662.

[29] Diyah Ariyani et al., "How Is the Role of BPRS Intermediation in Indonesia? Analysis of Internal and External Factors Towards Financing," *Proceedings of the International Conference of Islamic Economics and Business (ICONIES).* 11, no. 1. (2025): 1547.

[30] Dimas Bagus Maolana and Rina Rosia, "Peran CAR, FDR, Dan BOPO terhadap Stabilitas Perbankan dengan NPF sebagai Pemoderasi pada Bank Umum Syariah 2019-2024," *JIHBIZ: Global Journal of Islamic Banking and Finance.* 7, no. 2. (2025): 304-305.

[31] Dedy Dwi Arseto, Yenni Arfah, and Saparuddin Siregar, "The Effect of Capital Adequacy Ratio (CAR) and Liquidity on Profitability of Islamic Commercial Banks in Indonesia for the 2016-2020 Period," *Jurnal Ilmiah Ekonomi Islam.* 8, no. 01. (2022): 911.

increases with a higher CAR.[32] The NPF is influenced by several factors, such as Murabahah Financing, Gross Domestic Product (GDP), Bank Size, Capital Adequacy Ratio (CAR), Inflation, and Exchange Rates. Meanwhile, a previous study was conducted by Muhammad Bahrul Ilmi and Gita Paramitha in 2025 titled "Analisis Faktor-faktor yang Mempengaruhi Pembiayaan Bermasalah (NPF) pada Bank Syariah di Indonesia 2014-2018." Their research indicated that the Capital Adequacy Ratio (CAR) influences NPF.[33]

Pursuant to Bank Indonesia Regulation No. 15/12/PBI/2013, the CAR is evaluated and set at a minimum of 8%.[34] The value of each rupiah backed by equity is assessed using the CAR ratio relative to assets, investments, and other liabilities that may carry credit risk. This CAR indicator shows the extent to which a bank's equity can offset a decline in its assets.[35] The equity ratio can be calculated as follows:

$$CAR = \frac{\text{Total Capital Bank}}{\text{Risk Weighted Assets (RWA)}} \text{ X } 100\%$$

4. Return on Assets

ROA is used to assess how profitable a business is in conducting its overall operations. This ratio shows the proportion of net income to the capital invested in assets.[36] Meanwhile, a previous study was conducted by Fatmi Hadiani and Elva

[32] Supriyatun et al., "Factors Affecting Capital Adequacy Ratio at Commercial Banks on the Indonesia Stock Exchange," *Perwira International Journal of Economics & Business (PIJEB).* 3, no. 1. (2023): 18.

[33] Muhammad Bahrul Ilmi and Gita Paramitha, "Analisis Faktor-Faktor yang Mempengaruhi Pembiayaan Bermasalah (NPF) pada Bank Syariah di Indonesia 2014-2018," *Manager: Journal of Management and Administration Science.* 3, no. 3. (2025): 108.

[34] Nuramal, Asbi Amin, and Sitti Mispa, "The Role of Capital Adequacy Ratio (CAR), Loan to Deposit Ratio (LDR) and Company Size on Profitability," *Al-Buhuts.* 20, no. 1. (2024): 498-499.

[35] Riskia Putri and Sri Kania Dewi Yana, "Pengaruh Capital Adequacy Ratio (CAR), Financing to Deposit Ratio (FDR), dan Non Performing Financing (NPF) terhadap Profitabilitas dengan Inflasi sebagai Variabel Intervening pada Bank Syariah Indonesia (BSI) Masa Pandemi Covid-19," *KOMITMEN: Jurnal Ilmiah Manajemen.* 5, no. 2. (2024): 95.

[36] Kumaidi, "Examining ROA, ROE, and FDR Contributions to CAR BSI during PostPandemic (2021-2023)," *El-Mal : Jurnal Kajian Ekonomi & Bisnis Islam.* 6, no. 3. (2025): 2236.

Oktavia Sari in 2023 titled "Non-Performing Financing pada Bank Umum Syariah dengan Faktor Determinan ROA, BOPO, CAR, dan FDR." In their study, "ROA was found to have a significant negative influence on NPF."[37]

A bank's ability to utilize its assets will be hindered if its return on assets is high, as this will increase earnings and profitability. On the other hand, a lower ROA indicates a weakening of the bank's ability to manage its assets to increase revenue and cut costs.[38] This ratio can be expressed as:

$$ROA = \frac{\text{Net Income}}{\text{Total Assets}} \text{ X } 100\%$$

5. Operating Expenses to Operating Income (OEOI/BOPO)

Operating Expenses to Operating Income (OEOI/BOPO) ratio is used to measure a bank's effectiveness and capacity in conducting its daily operations.[39] Meanwhile, according to Riyadi in Fadhilah & Suprayogi in the year 2019, a lower OEOI/BOPO ratio is a sign of superior bank management performance because it indicates better utilization of available resources. A bank's profitability is influenced by the OEOI/BOPO ratio. A bank's revenue and profitability will increase as cost effectiveness improves.[40]

Meanwhile, a previous study was conducted by Ely Lestari in 2025 titled "Determinants of Non-Performing Financing in Sharia Commercial Banks in Indonesia (Case Study of Sharia Commercial Banks Registered with the Financial Services Authority 2020-2023)." The results of the study showed that

[37] Fatmi Hadiani and Elva Oktavia Sari, "Non-Performing Financing pada Bank Umum Syariah dengan Faktor Determinan ROA, BOPO, CAR, dan FDR," *Journal of Applied Islamic Economics and Finance.* 3, no. 2. (2023): 266.

[38] Suci Nungcahyani and Agung Wahyudi, "Pengaruh Pembiayaan terhadap Profitabilitas (ROA) pada Bank Umum Syariah di Indonesia (2017-2022)," *Jurnal Ilmiah Ekonomi Islam.* 10, no. 01. (2024): 879.

[39] Subaktiar Subaktiar, Ujang Abdullah, and Radiah Radiah, "Pengaruh Capital Adequacy Ratio (CAR), Non Performing Loan (NPL), Biaya Operasional terhadap Pendapatan Operasional (BOPO) terhadap Likuiditas yang Diukur dengan Loan to Deposit Ratio pada PT. Bank Mandiri (Persero) Tbk," *Jurnal Ekonomi dan Pembangunan Indonesia.* 2, no. 1. (2024): 274.

[40] Amri Darma Kurniawan S et al., "Analisis Pengaruh Rasio-Rasio Keuangan terhadap Rasio Beban Operasional-Pendapatan Operasional (BOPO) pada Bank Umum Syariah di Indonesia," *Jurnal Ekonomi dan Pembangunan Indonesia.* 2, no. 4. (2024): 123.

"OEOI/BOPO has a significant influence on NPF."[41] OEOI/BOPO itself is the ratio of total operating expenses to total operating incomes, which serves as a measure of a bank's efficiency.[42] OEOI/BOPO is calculated using the following formula:

$$OEOI/BOPO = \frac{\text{Operating Expenses}}{\text{Operating Income}} \text{ X } 100\%$$

RESEARCH METHODOLOGY

This study employs a quantitative approach, utilizing secondary data as the primary source of information. The secondary data used includes annual banking reports, books, academic articles, and other literature relevant to the research topic. All financial data analyzed were sourced from the annual reports of each Sharia Commercial Bank, accessed via the companies' official websites for the observation period from 2021 to 2025. The researcher in this study used RStudio version 2026 to process the data. The study period covered five years, from 2021 to 2025.

This study was conducted through descriptive statistical analysis, panel model selection tests (the Chow test to choose between CEM and FEM, and the Lagrange Multiplier test to confirm the choice between CEM and REM), estimation of the Common Effect Model (CEM) regression model, which included the t-test, F-test, and coefficient of determination, and concluded with a test of classical assumptions to ensure the model's validity. Meanwhile, the technique used was "panel data regression analysis using the CEM (Common Effect Model) approach." Since the results of the model selection test indicated that the CEM model was the most appropriate for this study, that model was selected." The Common Effect Model (CEM) itself is an analysis of the entire dataset without taking into account the time

[41] Ely Lestari, Rr Maryono, and Tjahjaning Poerwati, "Determinants of Non-Performing Financing in Sharia Commercial Banks in Indonesia (Case Study of Sharia Commercial Banks Registered with the Financial Services Authority 2020-2023)," *COSTING: Journal of Economic, Business and Accounting.* 8, no. 4. (2025): 3324.

[42] Anjelia Ariesta Wibowo, Widia Yuliyansa, and Wulandari, "Pengaruh CAR, NPL, dan BOPO terhadap ROA pada Bank Umum Konvensional di Indonesia," *Journal of Artificial Intelligence and Digital Business (RIGGS).* 4, no. 2. (2025): 540.

and location of data collection. The CEM model is the most comprehensive model, treating all variables equally.[43]

The population in this study comprises "all Sharia commercial banks registered with and supervised by the Indonesia Financial Services Authority." The sample was selected "using purposive sampling, a method of sampling based on specific considerations tailored to the research objectives." This technique was applied because not all sharia commercial banks had consistent and complete data throughout the observation period. The criteria used in determining the sample include the following:

1. Sharia commercial banks registered with and supervised by the Indonesia Financial Services Authority;
2. Possess complete annual financial statements for the study period, namely 2021-2025, to ensure the consistency of panel data;
3. Regularly publish annual financial statements on each bank's official website to ensure data reliability and transparency;
4. Have not undergone any changes in institutional status, such as mergers, spin-offs, or conversions, during the study period, with the exception of Bank Syariah Indonesia (BSI), which resulted from a merger of entities in 2021;
5. Be classified as a national-scale Sharia Commercial Bank, not a regional bank.

Based on these criteria, five sharia commercial banks were identified as eligible for inclusion in the research sample, as listed in table 1 below:

Table 1. List of Research Samples

No.	Bank
1.	Bank Syariah Indonesia (BSI)
2.	Bank Muamalat Indonesia
3.	Bank Mega Syariah
4.	Bank Panin Dubai Syariah
5.	Bank BTPN Syariah

[43] Risseu Rizkia Monika et al., "Pengaruh Kepemilikan Manajerial, Kepemilikan Institusional, Profitabilitas dan Ukuran Perusahaan terhadap Kebijakan Deviden," *Jurnal Mahasiswa Manajemen dan Akuntansi.* 1, no. 2. (2022): 195.

Conceptual Framework

The independent variables used in this study are the Capital Adequacy Ratio (CAR), Return on Assets (ROA), and Operating Expenses to Operating Income (OEOI/BOPO), while the dependent variable is Gross Non-Performing Financing (NPF). The conceptual framework illustrating the influence of the independent variables on the dependent variable, both partially and simultaneously, is presented in figure 1 below:

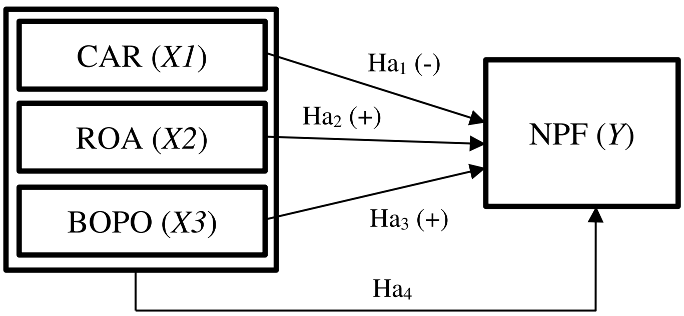

Figure 1. Conceptual Framework

Hypothesis

Based on the conceptual framework presented above, the research hypothesis can be formulated as follows:

1. Criteria for Hypothesis Testing:
   a. Partial Test (t-test)
      1) Hypothesis 1
         a) $H0_1$: “CAR has no partial influence on NPF.”
         b) Ha_1: “CAR has a partial influence on NPF.”
      2) Hypothesis 2
         a) $H0_2$: “ROA has no partial influence on NPF.”
         b) Ha_2: “ROA has a partial influence on NPF.”
      3) Hypothesis 3
         a) $H0_3$: “OEOI/BOPO has no partial influence on NPF.”
         b) Ha_3: “OEOI/BOPO has a partial influence on NPF.”
   b. Simultaneous Test (F-test)
      4) Hypothesis 4

a) $H0_4$: “CAR, ROA, and OEOI/BOPO do not simultaneously influence NPF.”

b) Ha_4: “CAR, ROA, and OEOI/BOPO simultaneously influence the NPF.”

2. Decision Criteria

   a. “If the p-value is < 0.05, then H0 is rejected and Ha is accepted.”

   b. “If the p-value is ≥ 0.05, then H0 is accepted and Ha is rejected.”

RESULTS AND DISCUSSION

Descriptive Statistical Analysis

Table 2. Descriptive Statistics

Variabel	N	Minimum	Maximum	Mean	Std. Deviation
X1(CAR)	25	20.29	58.30	33.09	11.99
X2(ROA)	25	0.02	11.43	2.85	3.13
X3(OEOI/BOPO)	25	55.67	99.41	75.93	14.01
Y(NPF)	25	0.06	4.26	2.23	1.17

Source: Data processed using RStudio version 2026

Table 2 presents the descriptive results for the 25 research samples. “The CAR variable (*X1*) indicates strong capital adequacy, with an average of 33.09%. Meanwhile, the ROA variable (*X2*), with an average of 2.85%, reflects the effective use of productive assets. Meanwhile, the OEOI/BOPO variable (*X3*), with an average of 75.93%, indicates a maintained level of operational efficiency, while the NPF (*Y*), with an average of 2.23%, shows that the quality of financing remains within safe risk limits. All variables have representative data distributions and are suitable for testing in the subsequent regression analysis stage.”

Model Selection Test

To determine the most appropriate estimation model for the research data, the following statistical tests were conducted:

Chow Test

Table 3. Results of the Chow Test

F-statistic	2.7624
Degree of Freedom (df1, df2)	4, 17
p-value	0.06163

Source: Data processed using RStudio version 2026

The results of the Chow test showed "a p-value of 0.0616. This value is above the significance level of 0.05, so the Common Effect Model (CEM) is a more appropriate choice than the Fixed Effect Model (FEM)." The research procedure did not require a Hausman test because the selected model was the CEM. "The next step in model selection is to conduct the Lagrange Multiplier Test to determine whether the CEM remains consistent or if the Random Effects Model is a more appropriate choice."

Lagrange Multiplier Test (LM Test)

Table 4. Results of the Lagrange Multiplier Test

Chi-square (χ^2)	0.66957
Degree of Freedom (df)	1
p-value	0.4132

Source: Data processed using RStudio version 2026

The results of the Lagrange Multiplier test showed "a p-value of 0.4132. This value is greater than the significance level of 0.05, therefore, the Common Effect Model (CEM) is accepted as the best model in this study." This decision indicates that "there are no significant differences between individuals or over time in the data used, so the Common Effect Model is sufficiently accurate for estimating the study's parameters."

Common Effect Model (CEM) Estimation Results

Partial Regression Test (t-test)

Table 5. Results of the Partial Regression Test (t-Test)

Variabel Independen	Koefisien (Estimate)	Std. Error	t-value	Pr(>|t|)
(Intercept)	-1.180206	1.251673	-1.2157	0.00125 **
X1(CAR)	0.026030	0.033196	0.7841	0.44172
X2(ROA)	0.099085	0.012696	5.8260	0.00007 ***
X3(BOPO)	0.052864	0.019329	2.7350	0.01241 *
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1				

Source: Data processed using RStudio version 2026

The results of the Common Effect Model estimates show the influence of each independent variable on NPF as follows:

1. CAR (X1): "A coefficient of 0.0260 with a p-value of 0.4417 > 0.05, indicating that this variable has no influence on NPF. This indicates that changes in the capital adequacy ratio do not directly impact the quality of financing during this period."
2. ROA (X2): "A coefficient of 0.0991 with a p-value of 0.00007 < 0.05 indicates that this variable has a positive and significant influence on NPF. This means that increased profitability contributes to a rise in financing risk."
3. OEOI/BOPO (X3): "A coefficient of 0.0529 with a p-value of 0.0124 < 0.05 indicates that this variable has a positive and significant influence on NPF at the 5% level. This suggests that operational inefficiency significantly increases credit risk in the banks under study."

Simultaneous Test (F-test)

Table 6. Results of the Simultaneous Test (F-Test)

F-statistic	13.9942
Degree of Freedom (DF)	3 dan 21
p-value	0.014792

Source: Data processed using RStudio version 2026

The results of the F-test show "an F-statistic of 13.9942 with a p-value of 0.0148. Since the p-value is less than the significance level of 0.05, the variables CAR, ROA, and OEOI/BOPO simultaneously have a significant influence on

NPF.” This proves that “the variables of capital, profitability, and operational efficiency collectively constitute determining factors capable of explaining the variation in financing risk in the banks under study.”

Model Performance and Accuracy (Goodness of Fit)

Table 7. Model Performance and Accuracy Results (Goodness of Fit)

Total Sum of Squares	32.625
Residual Sum of Squares	10.34
R-Squared (R^2)	0.68312
Adjusted R-Squared	0.63403

Source: Data processed using RStudio version 2026

The results of the analysis show “an R-squared value of 0.6831 and an adjusted R-squared value of 0.6340. The adjusted R-squared value of 0.6340 indicates that 63.40% of the variation in the NPF variable can be explained by the CAR, ROA, and OEOI/BOPO variables in this regression model. The remaining 36.60% is influenced by other variables outside the model that were not examined.” Overall, the model has a good level of accuracy and is suitable for explaining the influence of independent variables on the quality of financing.

Testing Classical Assumptions in Panel Data

Normality Test

Table 8. Results of the Normality Test (Jarque-Bera Test)

X-squared value	df	p-value	Description
0.68584	2	0.7097	Normally Distributed

Source: Data processed using RStudio version 2026

The results of the normality test using the Jarque-Bera test “showed a p-value of 0.7097. This value is greater than the significance level of 0.05, so the regression model residuals are considered to be normally distributed.” This test confirms that “the research data satisfy the classical assumption of normality, which is an important prerequisite for ensuring that parameter estimates in the regression model are unbiased and reliable.”

Multicollinearity Test

Table 9. Results of the Multicollinearity Test

Independent Variables	VIF Value	Description
X1(CAR)	4.007019	There is no multicollinearity
X2(ROA)	5.474697	There is no multicollinearity
X3(OEOI/BOPO)	1.856395	There is no multicollinearity

Source: Data processed using RStudio version 2026

The results of the multicollinearity test, as measured by the Variance Inflation Factor (VIF), show that “all independent variables, including CAR (4.007), ROA (5.475), and OEOI/BOPO (1.856), have VIF values below 10. These figures confirm that there is no multicollinearity among the independent variables in the regression model.” Therefore, the variables in this study are statistically independent, and the regression model is deemed “free from multicollinearity bias that could interfere with the accuracy of parameter estimates.”

Heteroscedasticity Test

Table 10. Results of the Heteroscedasticity Test (Breusch-Pagan Test)

Statistical Value (BP)	df	p-value	Description
5.6874	3	0.1278	No Heteroscedasticity

Source: Data processed using RStudio version 2026

The results of the heteroscedasticity test using the Breusch-Pagan test “show a p-value of 0.1278. This value is greater than the significance level of 0.05, so the regression model is deemed free from heteroscedasticity.” This condition indicates that “the variance of the observed residuals is constant (homoscedastic), so the regression model used satisfies the classical assumptions and provides efficient and unbiased estimates.”

The Influence of the Capital Adequacy Ratio on Non-Performing Financing at Sharia Commercial Banks in Indonesia in the 2021-2025 Period

The results of the statistical tests show that the Capital Adequacy Ratio (CAR) variable has a coefficient of 0.0260 with a p-value of 0.4417. This figure exceeds the significance level of 0.05, therefore, Ha_1, which states that CAR influences

NPF, is rejected. This finding provides evidence that, in part, the capital adequacy ratio has no influence on fluctuations in non-performing financing at sharia commercial banks in Indonesia in the 2021-2025 period.

CAR is a key capital adequacy indicator that reflects a bank's ability to absorb losses on risky earning assets. The findings of this study demonstrate that the level of a bank's capital ratio does not guarantee a reduction in the rate of non-performing financing. Agency theory explains that capital should ideally function as a prudential banking instrument for agents to minimize risk to principals. However, the reality during the 2021-2025 period shows that the average CAR for Sharia Commercial Banks, at 33.09%, reflects a capital accumulation policy that is either excessive or merely aimed at meeting regulatory compliance, rather than serving as the primary determinant influencing the quality of financing disbursement. Throughout the study period, sharia commercial banks in Indonesia appear to have treated capital adequacy as a safety cushion to address post-pandemic economic uncertainty, rather than as a determining factor that directly influences borrowers' risk profiles. The quality of financing (NPF) in this study is determined more by variables of operational efficiency and profitability that reflect the managerial performance of the agents, rather than simply by the amount of available equity.

These findings are supported by a previous study conducted by Siska Lutfiana and Dita Andraeny in 2025, titled "Faktor Penentu Pembiayaan Bermasalah Internal Bank di Indonesia." The results of that study "indicate that the CAR has not been shown to have an influence.[44] This underscores that a strong capital base within Indonesia's banking ecosystem is not necessarily the primary solution for mitigating the risk of customer defaults. Sharia banks are expected not only to focus on maintaining high capital adequacy ratios but also to strengthen their risk mitigation analysis through precise assessments of financing quality and stricter operational oversight.

[44] Siska Lutfiana and Dita Andraeny, "Faktor Penentu Pembiayaan Bermasalah Internal BPRS di Indonesia," *JIEI : Jurnal Ilmiah Ekonomi Islam.* 11, no. 05. (2025): 33.

The Influence of Return on Assets on Non-Performing Financing at Sharia Commercial Banks in Indonesia in the 2021-2025 Period

The results of the statistical tests show that the Return on Assets (ROA) variable has a coefficient of 0.0991 with a p-value of 0.00007. This p-value is well below the significance level of 0.05, so Ha_2, which states that ROA has a significant influence on NPF, is accepted. ROA was found to have a positive influence on NPF, indicating that increased profitability at sharia commercial banks in Indonesia in the 2021-2025 period was actually accompanied by an increase in the risk of non-performing financing.

From the perspective of Agency Theory, this situation reflects risk-taking behavior on the part of the agent (bank management). Agents tend to strive to achieve high profitability targets in order to meet the expectations of the principal, or shareholders. This profit-seeking strategy is often carried out by relaxing borrower selection standards or channeling financing to high-risk sectors. A highly aggressive pursuit of profitability without adequate risk mitigation will ultimately trigger a surge in non-performing financing (NPF). While high bank profitability does indicate the agent's success in managing assets, this finding underscores the hidden costs associated with such practices. Success in generating profits does not always go hand in hand with sound asset quality if the managerial focus is too heavily weighted toward short-term results. During the study period, sharia commercial banks in Indonesia must exercise greater caution in maintaining a balance between profitability targets and the quality of their financing portfolios to ensure that asset efficiency does not undermine long-term financial stability.

These findings are supported by a previous study conducted by Aldi Setiadi and Dewi Lusiana in 2022, titled "Analisis Pengaruh ROA, CAR, BOPO dan FDR terhadap NPF pada Bank Umum Syariah di Indonesia Periode 2016-2022." Their study showed that "ROA has a significant influence on NPF."[45] These results make it clear that in sharia banking operations, uncontrolled profit management can pose

[45] Aldi Setiadi and Dewi Lusiana, "Analisis Pengaruh ROA, CAR, BOPO dan FDR terhadap NPF pada Bank Umum Syariah di Indonesia Periode 2016-2022," *Journal of Sharia Economics and Finance.* 2, no. 2. (2022): 215.

a real threat to a bank's financial health. Sharia banks need to tighten oversight of any increase in productive assets to ensure that the profitability achieved remains within the bounds of sound prudential banking practices.

The Influence of Operating Expenses on Operating Income on Non-Performing Financing at Sharia Commercial Banks in Indonesia in the 2021-2025 Period

The results of the statistical tests show that the Operational Expenses to Operating Income (OEOI/BOPO) variable has a coefficient of 0.0529 with a p-value of 0.0124. This p-value is less than the significance level of 0.05, so Ha_3, which states that OEOI/BOPO has a significant influence on NPF, is accepted. BOPO was found to have a positive and significant influence on NPF, indicating that the higher the operating expense ratio, the higher the risk of non-performing financing at sharia commercial banks in Indonesia in the 2021-2025 period.

Operational inefficiencies are a major driver of rising credit risk in sharia banking. Theoretically, a high BOPO ratio reflects the agent's failure to optimally perform cost management functions. Agency theory explains that conflicts of interest often lead to poor operational governance, in which agents fail to adequately monitor unproductive costs. This situation reflects weak internal controls within the banking sector, which should be a top priority in selecting and monitoring the quality of borrower financing. A high OEOI/BOPO ratio signals that bank management is unable to keep operational expenses in check relative to the revenue generated. This inability impacts the bank's diligence in managing financing risks, thereby increasing the likelihood of customer default. Sharia Commercial Banks with poor efficiency ratios tend to allow risk mitigation procedures to operate suboptimally due to resource constraints or ineffective managerial governance.

These findings are supported by a previous study conducted by Rizki Dwi Hardiansyah et al. in 2025, titled "Analisis Pengaruh Variabel Makro dan Mikro Ekonomi terhadap Non-Performing Financing pada Bank Umum Syariah Periode 2018-2023." Their study showed that the OEOI/BOPO has a positive influence on

NPF."[46] This empirical evidence confirms that operational efficiency is not merely an administrative figure, but a vital indicator of the health of a bank's assets. Sharia banks are expected to carry out sustainable operational transformations to maintain their efficiency ratios. These steps are crucial to ensuring that every financing transaction remains under strict and efficient risk management oversight.

The Simultaneous Influence of CAR, ROA, and OEOI/BOPO on NPF at Sharia Commercial Banks in Indonesia in the 2021-2025 Period

The results of the statistical tests show an F-statistic of 13.9942 with a p-value of 0.0148. Since this p-value is less than the significance level of 0.05, alternative hypothesis Ha4, which states that CAR, ROA, and OEOI/BOPO simultaneously influence NPF, is accepted. Meanwhile, this research model has an R-squared value of 0.6831 and an adjusted R-squared value of 0.6340. Based on the criteria proposed by Chin in 1998, an adjusted R-squared value of 0.6340 falls within the range of 0.33 to 0.67, so this research model is categorized as having moderate explanatory power.[47] This indicates that the CAR, ROA, and OEOI/BOPO variables are able to explain a moderate portion of the variation in NPF, while 36.60% of the variation in NPF is influenced by other variables outside this model. Meanwhile, Agency Theory views these variables as the principal's primary control instruments for monitoring the agent's performance. The synergy between capital adequacy (CAR), return on assets (ROA), and operational efficiency (OEOI/BOPO) reflects the overall quality of managerial governance. An imbalance in any of these variables, particularly regarding efficiency and risk selection in the pursuit of profitability, has been shown to have a direct impact on a decline in the quality of financing.

These findings are supported by previous research, namely a study conducted by Rika Lidyah in 2016 titled "Dampak Inflasi, BI Rate, Capital Adequacy Ratio

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[46] Rizki Dwi Hardiansyah, Moh Muksin, and Ahmad Fatoni, "Analisis Pengaruh Variabel Makro dan Mikro Ekonomi terhadap Non Performing Financing pada Bank Umum Syariah Periode 2018-2023," *Jurnal Masharif Al-Syariah: Jurnal Ekonomi dan Perbankan Syariah.* 10, no. 3. (2025): 1715.

[47] Nur Ayu Puspitasari, Muh. Yahya, and Husain. As, "Pengaruh Penggunaan Tekhnologi Pembelajaran terhadap Prestasi Belajar Siswa SMK Jaya Negara Makassar," *SENTRI: Jurnal Riset Ilmiah.* 3, no. 10. (2024): 4692.

(CAR), Biaya Operasional Pendapatan Operasional (BOPO) terhadap Non Performing Financing (NPF) pada Bank Umum Syariah di Indonesia." Her research results show that, taken together, the variables of inflation, the BI rate, CAR, and ROA have an influence on NPF.[48] Although this research model focuses more on internal variables without including macroeconomic variables, the consistency of the simultaneous test results underscores that the determinants of non-performing financing in sharia banking are multivariate and interrelated. Integrated supervision of capital, profitability, and efficiency must be conducted on an ongoing basis so that banks can operate with a healthy NPF ratio. Sharia banking management is expected to adopt an integrative approach to financial decision-making, given the strong interrelationships among these variables in collectively shaping the bank's risk profile.

CONCLUSION

Based on the results of the data analysis and discussion conducted regarding the determinants of Non-Performing Financing (NPF) at Sharia Commercial Banks in Indonesia in the 2021-2025 period, it can be concluded that:

1. The Capital Adequacy Ratio (CAR) does not have a significant partial influence on NPF. This indicates that the capital adequacy of sharia banks during the study period has not been a primary determinant of fluctuations in financing risk.
2. The Return on Assets (ROA) has a partial, positive, and significant influence on NPF. This finding suggests that increased profitability at sharia banks during this period was accompanied by a rise in financing risk, implying risk-taking behavior on the part of the banks in pursuing profit targets.
3. The Operating Expense to Operating Income (OEOI/BOPO) ratio has a partial, positive, and significant influence on the NPF. These results demonstrate that operational inefficiencies significantly increase credit risk. High operational

[48] Rika Lidyah, "Dampak Inflasi, BI Rate, Capital Adequacy Ratio (CAR), Biaya Operasional Pendapatan Operasional (BOPO) terhadap Non Performing Financing (NPF) pada Bank Umum Syariah di Indonesia," *I-Finance.* 2, no. 1. (2016): 1.

expenses relative to operating income worsen the quality of financing at sharia commercial banks.

4. Simultaneously, CAR, ROA, and OEOI/BOPO have a significant influence on NPF at sharia commercial banks in Indonesia. This research model has good predictive power with an R-squared value of 0.6831 and an adjusted R-squared of 0.6340, meaning that 63.40% of the variation in NPF can be explained by these three variables, while the remainder is influenced by other factors outside the model.

Theoretically, the results of this study reinforce the relevance of Agency Theory in the context of sharia banking, where the agent's performance in managing operations and assets is crucial to the security of funds entrusted by the principal. The researchers then recommend that bank management improve operational efficiency and adhere to the principle of prudence, and hope that future research can expand the model by incorporating macroeconomic variables and comparisons across categories of sharia banks to enrich the analytical results.

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