# The Influence of BOPO, LDR/LFR, and NPL on the Profitability of Core Capital Bank Group (KBMI) 1 Banks During the Covid-19 Pandemic

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## Abstract

*This study aims to evaluate the impact of the Operational Costs to Operating Income ratio (BOPO), Loan to Deposit Ratio (LDR), and Non-Performing Loans (NPL) on Profitability, measured through the Return On Assets (ROA) and Net Profit Margin (NPM) ratios of Bank KBMI 1 during the Covid-19 pandemic period spanning from 2020 to 2023. The research encompassed 28 companies affiliated with Bank KBMI 1/BUKU 1 as the population, and 25 companies were chosen as samples using purposive sampling techniques. The analysis was conducted through multiple linear regression on a dataset comprising 75 time series. The findings of the research indicate that: (1) BOPO exhibits a negative and statistically significant influence on profitability, encompassing both ROA and NPM, (2) NPL and LDR/LFR do not wield a significant impact on profitability, be it ROA or NPM. Consequently, in totality, BOPO, LDR/LFR, and NPL collectively contribute to influencing profitability.*

*Keywords: BOPO LDR, NPL, Profitability*

## INTRODUCTION

The COVID-19 pandemic has created unprecedented challenges around the world and has had a significant impact on various economic sectors. The World Health Organization (WHO) officially recognized Coronavirus Disease 19 (Covid-19) as a pandemic in early 2020 (WHO, 2020). In order to control the spread of the virus, the government implemented Large-Scale Social Restrictions (PSBB) in April 2020, which had a major impact on the community's economy. The economic consequences of the pandemic involve a decline in business activity and revenues, creating increased financial stress for individuals and businesses.

The banking industry, as a key element in the economic structure, has not been spared from the widespread impact of this pandemic. It is predicted that the impact of the corona pandemic in Indonesia will slow or even reduce credit/financing growth in the banking industry, which could then result in a decrease in industry profitability and an increase in the level of bad loans. Banks, defined as financial institutions that collect and distribute funds while providing various services, play an important role in shaping the economy.

According to Kasmir (2012:3), banks that have strong financial performance and high competitiveness can become active agents in providing commercial credit to the business world, making a significant contribution to economic growth, and providing a rapidly developing business environment (Supriyono, Herdhayinta , 2019).

The Financial Services Authority (OJK) has issued a new regulation (POJK No.12/POJK.03/2021) which replaces the previous regulation (POJK No.6/POJK.03/2016) and regulates the division of commercial banks into four categories. This change includes replacing the grouping system from Commercial Banks with Business Activities (BUKU) to Core Capital Bank Groups (KBMI), based on the amount of core capital owned by a bank. This regulation changes the grouping structure to reflect changes in the banking industry.

Several of these grouping categories have a significant impact on the regulatory function of bank business activities. OJK regulations (POJK No.6/POJK.03/2016) explain that BUKU 1 banks have restrictions in carrying out several business activities, including activities in Rupiah such as raising funds, channeling funds, trade financing, agency, and cooperation with a limited scope, system payments, electronic banking with limited coverage, temporary capital investment for credit rescue, and other services. In addition, BUKU 1 banks are allowed to carry out activities as foreign exchange traders and other activities that are considered basic products or activities in Rupiah which are generally carried out by banks and in accordance with statutory regulations.

The impact of this pandemic can be reflected in the percentage of financial ratios, where many KBMI 1 bank companies experienced losses, increased non-performing loans and decreased profitability. From a number of companies registered on KBMI 1, looking at the financial reports, almost all banks experienced a significant decline in profitability levels in the first year of the pandemic, namely in 2020. This decline is also reflected in the LDR which has decreased in several banks. Meanwhile, the BOPO ratio tends to increase due to a decrease in bank profitability, which is not always accompanied by a decrease in daily operational costs.

Several banks, such as BPD Banten, Bank Kesejahteraan Ekonomi, Artos Indonesia Bank, and JTrust Indonesia, even experienced negative profitability, with BPD Banten consistently experiencing negative profitability for three consecutive years since the Covid-19 pandemic. The next problem arises in the form of non-performing loans (NPL) which tend to be high, especially at BPD Banten and Bank Fama Internasional. Bank Artos Indonesia also experienced a significant increase in NPL for three consecutive years, as a sign of a decline in sales and other business activities.

With limited core capital and limited activities that can be carried out by BUKU 1 banks or KBMI 1 banks, it is a challenge to intervene to achieve good profitability and avoid an increase in non-performing loans, especially with the Covid-19 pandemic. This encourages banks to re-evaluate risk management strategies and lending practices to reduce potential losses.

In the banking realm, bank health has an important role in building trust. Customer trust in the bank is a key factor that helps bank management design a solid business strategy. Bank Indonesia, with the aim of achieving a healthy banking system, is trying to consolidate banking institutions in Indonesia. To maintain customer trust, banking institutions need to strengthen bank health by maintaining liquidity and continuing to strive to increase profitability. This aims to ensure that banks can fulfill their obligations and maintain their performance so that they always gain the trust of the public (Haq, Murni & Loindong, 2022).

The importance of the link between banking sector profitability and economic growth has been recognized (Rajan & Zingales, 1998; Levine, 1998). The profitability of the banking sector has a direct impact on the effective use of financial resources and the rational allocation of public resources (Athanasoglou et al., 2008). Bank profitability is a key element in maintaining the sustainability of the banking sector (de Guindos, 2019), because it measures the overall level of development and sustainable efficiency of commercial banks (Vera-Gilces et al., 2020).

Profitability serves as the primary metric for assessing the quality of a company's performance and is utilized as a benchmark to evaluate the effectiveness and economic efficiency of the company. It plays a crucial role in driving company performance towards achieving profits by controlling deviations in operational activities that could disrupt overall performance. Company management commonly employs profitability as a tool to assess the efficient utilization of all capital, including both equity and foreign capital, in generating profits. Furthermore, profitability is pivotal in gauging a company's economic capabilities and the efficiency of its capital utilization, making it a key factor in company management. The banking sector, akin to other industries, relies on the role of profitability in managing operational activities. In the banking context, profitability is typically measured as a percentage of profit against Third Party Funds, given the direct connection between most banking activities and society (Wardani & Ismunawan, 2021). Therefore, exploring factors that support profitability becomes essential to optimize financial performance and generate profits.

Amidst the challenges posed by the Covid-19 pandemic, the banking sector encountered various potential risks, including non-performing loan (NPL) financing risk, market risk, and liquidity risk. These risks can ultimately impact banking performance and profitability.

Previous studies have delved into the factors influencing bank profitability. Supriyono & Herdhayinta (2019) determined that Total Assets, Loan to Deposit Ratio (LDR), Operating Expenses to Operating Income ratio (OE/OI), and Net Interest Margin (NIM) internally influence the profitability of BPD banks. Externally, inflation and the BI Rate were found to influence profitability, particularly in terms of Return On Assets (ROA) and Return On Equity (ROE).

Widyastuti and Aini's (2021) research examined the influence of Capital Adequacy Ratio (CAR), Non-Performing Loans (NPL), and Loan to Deposit Ratio (LDR) on bank profitability. Results indicated that CAR and LDR did not significantly impact profitability, while NPL had a negative influence.

Pinasti and Mustikawati (2018) investigated factors influencing the profitability of commercial banks, utilizing Capital Adequacy Ratio (CAR), Operational Costs to Operating Income (BOPO), Non-Performing Loans (NPL), Net Interest Margin (NIM), and Loan to Deposit Ratio (LDR) as determining factors. Their findings revealed that CAR and LDR had a negative and insignificant influence on profitability, whereas BOPO exhibited a negative and significant influence. NIM, conversely, had a positive and significant impact on profitability. Overall, when considered collectively, all the ratios had an influence on profitability.

In their recent study, Gazi Nahiduzzaman, Harymawan, Masud, & Dhar (2022) explored the effects of the Covid-19 pandemic on the financial performance and profitability of private commercial banks in Bangladesh. They assessed financial ratios against three profitability indicators: Return On Assets (ROA), Return On Equity (ROE), and Net Interest Margin Rate (NIMR). The research findings indicate that the Non-Performing Loan Rate and the size of the bank significantly and negatively influence ROA, ROE, and NIMR in private commercial banks in Bangladesh. Additionally, the Capital Adequacy Ratio (CAR) has a similar impact, albeit only on ROA and ROE, while the Loan to Deposit Ratio (LDR) significantly reduces ROA during the Covid-19 pandemic period.

Research into the performance of KBMI 1 banks is particularly intriguing due to the limited business activities and core capital of this bank type. This study concentrates on how the banking sector can formulate strategic plans based on key determinants of profitability. If performance continues to improve, it has the potential to become a significant driver for economic recovery. Hence, policymakers, especially the monetary authority, need to pay close attention to ensure the welfare of the domestic banking sector, maintaining its health during the pandemic. These findings also offer a foundation for future policy recommendations for stakeholders in the banking industry.

The Covid-19 pandemic has significantly affected every facet of the economy, leading to the collapse of many businesses, particularly those lacking a robust strategy to sustain profitability through consistent funding. It's crucial to understand the determinants of profitability, particularly within the banking sector categorized as KBMI 1, to prepare for unforeseen crises. Thus, there is a keen interest among researchers to identify factors that drive profitability, particularly analyzing the impact of Operational Costs on Operating Income (BOPO), Loan to Deposit Ratio (LDR)/Loan to Funding Ratio (LFR), and Non-Performing Loans (NPL) on profitability indicators such as Return On Assets (ROA) and Net Profit Margin (NPM). This analysis focuses specifically on Bank KBMI 1 during the Covid-19 pandemic, aiming to uncover areas for improvement to bolster profitability in the face of sudden adverse conditions.

## LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

### Financial Report Analysis

According to Putra et al., (2021), financial reporting is the process of breaking down a single item of information into various components and evaluating each component and linking them to each other to achieve a comprehensive and precise understanding. Financial statement analysis benefits a company by providing insight into its financial health. Alternatively, Harahap (2017) outlines various objectives of financial report analysis, encompassing:

1. Screening: This involves a systematic analysis of financial reports with the objective of identifying potential investment opportunities and potential mergers.
2. Forecasting: Financial reports are scrutinized to create forecasts of the company's anticipated future financial condition.
3. Diagnosis: The goal of this analysis is to offer insights into potential issues that may arise in operational management, financial matters, or other areas based on the results of financial report analysis.
4. Evaluating: The outcomes of financial report analysis are utilized to evaluate management performance, operational efficiency, and various other aspects of a company's functioning.

### Financial Ratio Analysis

As Wardiyah (2017:135) state, financial ratio analysis is a method of analysis that establishes connections between various elements in a company's balance sheet and income statement. The primary purpose is to offer an overview of the historical performance and evaluation of the company's position.

The key objective of financial ratio analysis is to evaluate the efficiency and effectiveness of company management, as evidenced by financial records and reports. Moreover, financial ratio analysis yields advantages not only for internal stakeholders within the company but also for external parties. This is because ratio analysis aids internal analysts in assessing the company's operational outcomes, identifying and rectifying errors, and proactively addressing potential financial challenges in the future.

**KBMI 1 Bank**

As per the regulations outlined in Law of the Republic of Indonesia Number 10 of 1998 regarding banking, the term "banking" encompasses all facets related to banks, encompassing institutional structure, operational activities, and the methods and procedures for executing bank business activities. The classification of banks is also conducted based on ownership, which includes mixed-owned banks, foreign-owned banks, national private banks, and government-owned banks (Juniar, et al., 2023). Additionally, the Financial Services Authority (OJK) classifies banks based on core capital, as stipulated in OJK Regulation Number 12/POJK.03/2021 concerning commercial banks. Specifically, Bank KBMI 1 denotes banks with core capital amounting to less than 6 trillion rupiah.

**Profitability**

Profitability is an indicator of a company's performance which is measured through the profits it obtains. This reflects the company's success and effectiveness in optimal use of resources, which is reflected in the company's profit achievement and economic growth. In achieving a high level of profit, effective management plays a very important role because the company's profit level is the main factor considered by investors in making their investment decisions (Pranaditya, Andini, & Andika, 2021).

**Return On Asset**

When assessing a company's profitability, a relevant indicator is Return on Assets (ROA). ROA is used as a way to evaluate how efficient a company is in utilizing available financial resources (Sukmayanti & Triaryati, 2018). A high level of ROA indicates that the company also has a high level of net profit (Ummah & Efendi, 2022). An increase in a bank's ROA reflects an increase in profits earned by the bank, and shows that the bank's condition is improving in increasing funds through third party funds that have been collected (Zahwa, 2019). The formula for computing return on assets is as follows:

$$ROA = \frac{Net\ Profit}{Total\ Asset} \times 100\%$$

**Net Profit Margin**

Net Profit Margin (NPM) is a ratio that compares profit after tax with total sales. In situations where there are large fluctuations in profits, management tends to make adjustments in order to reduce managers' anxiety about achieving stable profit targets in the future (Septoaji, 2012 in Artawan et al., 2020). The formula utilized is as follows:

$$NPM = \frac{EBIT}{Net\ income} \times 100\%$$

Net Profit Margin (NPM) is an important aspect for investors as a significant indicator for assessing a company's potential in the future by considering how far the company's profitability has developed (Nurendra, 2024).

**Operational Costs to Operating Income (BOPO)**

Operating Costs Operating Income (BOPO) is a comparison that describes the extent to which a bank can run its operations efficiently. An increase in operational costs can cause a decrease in profit before tax, which will ultimately reduce the bank's profitability (Sitompul, 2019: 235). The computation of BOPO utilizes the formula presented as follows :

$$BOPO = \frac{Operational\ Costs}{Operating\ Income} \times 100\%$$

Operating income is the main source of income for banks, especially in the form of interest income obtained from lending and other operational income. The lower the BOPO level, the higher the level of profitability (Iklin, 2024).

**Loan to Deposit Ratio (LDR)**

Loan to Deposit Ratio (LDR) is an important indicator in measuring bank health in terms of liquidity (Iklin, 2024). LDR describes a bank's ability to provide loans to debtors using the capital it has and funds that have been collected from the public (Sudarmawanti & Pramono, 2017). According to Bank Indonesia Regulation Number 15/7/PBI/2013, if the LDR is below or less than 78%, this indicates that the bank may not be able to properly distribute all the funds it has collected. Calculating the LDR value can be accomplished using a formula stipulated by Bank Indonesia, as specified in a Bank Indonesia Regulation No.17/11/PBI/2015, 25 June 2015:

$$LDR/LFR = \frac{Credits\ Granted}{Total\ Funds\ Received} \times 100\%$$

**Non Performing Loan (NPL)**

The Non-Performing Loan (NPL) ratio is used as a method to assess bank management's ability to manage credit that is experiencing payment problems (N. P. S. W. Putri & Dana,

2018). Credit risk accepted by the bank is one of the bank's business risks, which arises when credit given by the bank to debtors is not repaid. The higher this ratio, the worse the bank's credit quality becomes, resulting in an increase in the number of problem loans and potential losses, whereas if the NPL is lower, the bank's profitability will increase (N. P. S. W. Putri & Dana, 2018). The calculation formula for NPL is governed by Bank Indonesia Circular Letter Number 17/11/PBI/2015, 25 June 2015:

$$NPL = \frac{\text{Total NPL}}{\text{Total credits extended}} \times 100\%$$
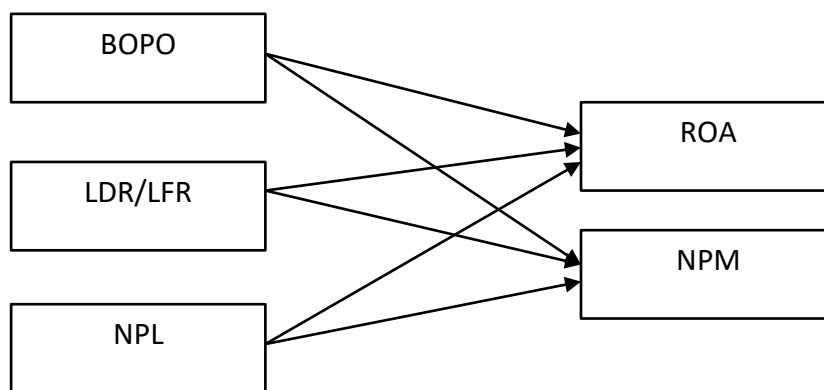
**Research Framework**



**Figure 1**
**Research Framework**

**Hypothesis**

**H$_1$: Operational Costs to Operating Income (BOPO) influence Bank KBMI 1 Profitability (ROA) 1 Period 2020-2022**

**H$_2$: Operational Costs to Operating Income (BOPO) influence Bank KBMI 1 Profitability (NPM) 1 Period 2020-2022**

**H$_3$: Loan to Deposit Ratio (LDR)/LFR influences Bank KBMI 1 Profitability (ROA) 1 Period 2020-2022**

**H$_4$: Loan to Deposit Ratio (LDR)/LFR influences Bank KBMI 1 Profitability (NPM) 1 Period 2020-2022**

**H$_5$: Non-Performing Loans (NPL) influence Bank KBMI 1 Profitability (ROA) 1 Period 2020-2022**

**H$_6$: Non-Performing Loans (NPL) influence Bank KBMI 1 Profitability (NPM) 1 Period 2020-2022**

**H$_7$: BOPO, LDR/LFR and NPL influence Bank KBMI 1 Profitability (ROA) 1 Period 2020-2022**

**H₈: BOPO, LDR/LFR and NPL influence Bank KBMI 1 Profitability (NPM) 1 Period 2020-2022**

## RESEARCH METHOD

This study adopts a descriptive quantitative approach, enabling researchers to ascertain the value of each variable and elucidate the impact of independent variables on the dependent variables. The research variables comprise three independent variables, namely BOPO (X1), LDR/LFR (X2), and NPL (X3). On the other hand, the dependent variables encompass two profitability variables, namely ROA (Y1) and NPM (Y2). The data utilized in this study is sourced from secondary sources, specifically obtained through the OJK website and relevant company websites in the form of financial reports and annual reports. The research population includes banks categorized under the BUKU 1/KBMI 1 bank group during the Covid-19 pandemic period (2020-2022), totaling 28. The purposive sampling method is employed with specific criteria, including banks within the BUKU 1/KBMI 1 group that have published financial reports for three consecutive years and submitted reports in rupiah. Adhering to these criteria, a research sample of 25 companies is obtained, resulting in a total of 75 processed data points.

The data analysis method involves multiple linear regression. The linear regression test encompasses classical assumption tests such as multicollinearity tests. Subsequently, the coefficient of determination (R2) and hypothesis testing, including the t-test and F-test, are conducted using SPSS 20 software. The analytical method in this research is expressed through the following mathematical equation:

$$Y = \alpha + \beta1\ X2 + \beta2\ X2 + \beta n\ Xn + e$$

Explanation:

Y: ROA, NPM
$\alpha$: Constant
X1: BOPO
X2: LDR
X3: NPL
e: Standard error

## RESULT AND ANALYSIS

**Multicollinearity Test**

Multicollinearity evaluation was carried out using the Variance Inflation Factor Index (VIF). It can be stated that there is no multicollinearity problem if the tolerance exceeds 0.10 and the VIF remains below 10 (Ghozali, 2006). The results of the multicollinearity test, as shown in the table below, verify that there are no significant independent correlation problems

in this research, both related to ROA and NPM profitability ratios. This conclusion can be drawn because all independent variables show tolerance values that exceed 0.10 and the VIF value is still below the acceptable threshold, namely 10.

Table 1
Multicollinearity test results with the dependent variable ROA

| Model | | Unstandardized Coefficients | | Standardized Coefficients Beta | Collinearity Statistics | |
|---|---|---|---|---|---|---|
| | | B | Std. Error | | Tolerance | VIF |
| 1 | (Constant) | ,074 | ,005 | | | |
| | BOPO | -,075 | ,003 | -,934 | ,987 | 1,013 |
| | LFR | ,000 | ,003 | ,004 | ,993 | 1,008 |
| | NPL | ,104 | ,117 | ,038 | ,990 | 1,011 |

a. Dependent Variable: ROA

Table 2
Multicollinearity test results with the dependent variable NPM

| Model | | Unstandardized Coefficients | | Standardized Coefficients | Collinearity Statistics | |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | Tolerance | VIF |
| 1 | (Constant) | 4,217 | 1,513 | | | |
| | BOPO | -5,081 | 1,021 | -,505 | ,987 | 1,013 |
| | LFR | ,602 | ,894 | ,068 | ,993 | 1,008 |
| | NPL | -26,787 | 34,245 | -,079 | ,990 | 1,011 |

a. Dependent Variable: NPM

## Multiple Linear Regression Analysis

This multiple linear regression analysis is used to evaluate the impact of BOPO (X1), LDR/LFR (X2), and NPL (X3) variables on ROA Profitability (Y1). The multiple linear regression analysis process was carried out using SPSS 20 software, and the results can be found in the following table:

Table 3
Summary of the results of multiple linear regression analysis with the ROA variable as the dependent variable

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | ,074 | ,005 | | 14,229 | ,000 |
| | BOPO | -,075 | ,003 | -,934 | -21,448 | ,000 |
| | LFR | ,000 | ,003 | ,004 | ,095 | ,924 |
| | NPL | ,104 | ,117 | ,038 | ,885 | ,379 |

a. Dependent Variable: ROA

From the results of the multiple linear regression analysis in the table, the following equation can be created:

$$ROA = 0,074 - 0,075\ X1 + 0,000\ X2 + 0,104\ X3$$

A constant α value of 0.074 indicates that if the BOPO, LDR/LFR and NPL variables are considered constant (without change), then ROA will increase by 0.074. The β1 coefficient of -0.075 indicates that if the value of the BOPO variable increases by one percent, the ROA of the KBMI 1 bank company will decrease by 0.017, assuming the other independent variables remain constant. The β2 coefficient of 0.000 indicates that a one percent increase in LDR/LFR has no impact on changes in the ROA of the KBMI 1 bank company, assuming the other independent variables are constant. The coefficient β3 of 0.104 means that if the value of the NPL variable increases by one percent, the ROA of the KBMI 1 bank company will increase by 0.104, as long as the other independent variables remain constant.

Next, multiple linear regression analysis is used to evaluate the impact of BOPO (X1), LDR/LFR (X2), and NPL (X3) on NPM Profitability (Y2). The multiple linear regression analysis process was carried out using SPSS 20 software, and the results can be found in the table:

Table 4
Summary of results of multiple linear regression analysis with the NPM variable as the dependent variable

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 4,217 | 1,513 | | 2,786 | ,007 |
| | BOPO | -5,081 | 1,021 | -,505 | -4,975 | ,000 |
| | LFR | ,602 | ,894 | ,068 | ,674 | ,503 |
| | NPL | -26,787 | 34,245 | -,079 | -,782 | ,437 |

a. Dependent Variable: NPM

From the results of the multiple linear regression analysis in the table, the following equation can be created:

NPM = 4,217 - 5,081 X1+ 0,602 X2 - 26,787 X3

The constant α value of 4.217 indicates that if the BOPO, LDR/LFR and NPL variables are considered constant (without change), then NPM will increase by 4.217. The β1 coefficient of -5.081 indicates that if the value of the BOPO variable increases by one percent, the NPM of banking companies will decrease by 5.081, assuming the other independent variables remain constant. The β2 coefficient of 0.602 means that if LDR/LFR increases by one percent, the NPM of banking companies will increase by 0.602, as long as the other independent variables remain constant. The β3 coefficient of -26.787 indicates that if the value of the NPL variable increases by one percent, the NPM of banking companies will decrease by 26.787, assuming the other independent variables remain constant.

**T-Test**

Table 5

Summary of T-test results with the profitability variable ROA as the dependent variable

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | ,074 | ,005 | | 14,229 | ,000 |
| | BOPO | -,075 | ,003 | -,934 | -21,448 | ,000 |
| | LFR | ,000 | ,003 | ,004 | ,095 | ,924 |
| | NPL | ,104 | ,117 | ,038 | ,885 | ,379 |

a. Dependent Variable: ROA

Table 6

Summary of T-test results with the profitability variable NPM as the dependent variable

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 4,217 | 1,513 | | 2,786 | ,007 |
| | BOPO | -5,081 | 1,021 | -,505 | -4,975 | ,000 |
| | LFR | ,602 | ,894 | ,068 | ,674 | ,503 |
| | NPL | -26,787 | 34,245 | -,079 | -,782 | ,437 |

a. Dependent Variable: NPM

Based on the table above, it can be concluded that:

1. BOPO (X1) to Return On Assets (Y1)

    The t test results for the BOPO variable on ROA show that the regression coefficient has a negative direction of -21.449. The estimated BOPO variable is t = -21.449 with a probability of 0.000. The significance value is 0.000, which is smaller than 0.05. Thus, it can be concluded that the first hypothesis is accepted, indicating that the BOPO variable has a significant negative influence on ROA profitability.

2. BOPO (X1) to Net Profit Margin (Y2)

    The t test results for the BOPO variable against NPM show that the regression coefficient has a negative direction of -4.975. The estimated BOPO variable is t = -4.975 with a probability of 0.000. The significance value is 0.000, which is smaller than 0.05. Therefore, it can be concluded that the second hypothesis is accepted, indicating that the BOPO variable has a significant negative effect on NPM profitability.

3. LDR/LFR (X2) to Return On Assets (Y1)

The results of the t test for the LDR/LFR variable on ROA show that the regression coefficient has a positive direction of 0.095. The estimated LDR/LFR variable is t = 0.095 with a probability of 0.924. The significance value is 0.924, which is greater than 0.05. Therefore, it can be concluded that the third hypothesis is rejected, indicating that the LDR/LFR variable has no significant effect on ROA profitability.

4. LDR/LFR (X2) to Net Profit Margin (Y2)

The t test results for the LDR/LFR variable against NPM show that the regression coefficient has a positive direction of 0.674. The estimated LDR/LFR variable is t = 0.674 with a probability of 0.503. The significance value is 0.503, which is greater than 0.05. Therefore, it can be concluded that the fourth hypothesis is rejected, indicating that the LDR/LFR variable has no significant effect on NPM profitability.

5. NPL (X3) to Return On Assets (Y1)

The t test results for the NPL variable on ROA show that the regression coefficient has a positive direction of 0.885. The estimated NPL variable is t = 0.885 with a probability of 0.379. The significance value is 0.379, which is greater than 0.05. Therefore, it can be concluded that the fifth hypothesis is rejected, indicating that the NPL variable has no significant effect on ROA profitability.

6. NPL (X3) to Net Profit Margin (Y2)

The results of the t test for the NPL variable against NPM show that the regression coefficient has a negative direction of -0.782. The estimated NPL variable is t = -0.782 with a probability of 0.437. The significance value is 0.437, which is greater than 0.05. Therefore, it can be concluded that the sixth hypothesis is rejected, indicating that the NPL variable has no significant effect on NPM profitability.

**F-Test**

A significance probability value of 0.000 indicates that this value is smaller than the predetermined significance level, namely 0.05. Thus, it can be concluded that the seventh hypothesis is accepted, which shows that Operational Costs to Operating Income (BOPO), Loan to Deposit Ratio (LDR), and Non-Performing Loans (NPL) together influence the profitability (ROA) of Bank KBMI 1 in the 2020-2022 period.

Table 7
Summary of F-test results with the ROA variable as the dependent variable

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | ,079 | 3 | ,026 | 154,629 | ,000[b] |
| | Residual | ,012 | 71 | ,000 | | |
| | Total | ,091 | 74 | | | |

a. Dependent Variable: ROA

b. Predictors: (Constant), NPL, LFR, BOPO

A significance probability value of 0.000 indicates a value smaller than the predetermined significance level, namely 0.05. So it can be concluded that the eighth hypothesis is accepted, where Operational Costs to Operating Income (BOPO), Loan to Deposit Ratio (LDR) and Non-Performing Loans (NPL) together influence the profitability (NPM) of KBMI Bank 1 Period 2020-2022.

Table 8
Summary of F-test results with the NPM variable as the dependent variable

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 396,795 | 3 | 132,265 | 9,092 | ,000[b] |
| | Residual | 1032,912 | 71 | 14,548 | | |
| | Total | 1429,707 | 74 | | | |

a. Dependent Variable: NPM

b. Predictors: (Constant), NPL, LFR, BOPO

**Coefficient of Determination Test**

The strength of the influence of the independent variable on the variation of the dependent variable can be obtained from the value of the determinant coefficient (R2), which ranges between zero and one.

Table 9
Results of the coefficient of determination test on the dependent variable **ROA**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | ,931[a] | ,867 | ,862 | ,0130263 |

a. Predictors: (Constant), NPL, LFR, BOPO

b. Dependent Variable: ROA

The table shows that the R Square for the variable ROA profitability is 0.862 or 86.2%. With the calculations that have been carried out, it can be concluded that around 86.2% of the variations that occur in profitability (ROA) can be explained by the BOPO, LDR and NPL variables. On the other hand, around 13.8% of the remainder is explained by other variables not included in the model used.

Table 10
Results of the coefficient of determination test on the **dependent variable NPM**

**Model Summary$^b$**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | ,527$^a$ | ,278 | ,247 | 3,8141906 |

a. Predictors: (Constant), NPL, LFR, BOPO
b. Dependent Variable: NPM

The table shows that the R Square for the variable on NPM profitability is 0.278 or 27.8%. With the calculations that have been carried out, it can be concluded that around 27.8% of the variation that occurs in profitability (NPM) can be explained by the BOPO, LDR and NPL variables. Meanwhile, around 72.2% of the remainder is explained by other variables not included in the model used.

**Result**

**The Effect of Operational Costs on Operating Income (BOPO) on Profitability**

The statistical test results for the variable Operational Costs to Operating Income (BOPO) show that the significance value is 0.000, smaller than the significance level $\alpha = 0.05$. This shows that Operational Costs to Operating Income (BOPO) has a significant influence on ROA Profitability. Similar results can be seen in the analysis of NPM profitability, where the t test for the BOPO variable also shows a significance value of 0.000, which is smaller than $\alpha = 0.05$. Therefore, the first and second hypotheses, which state "Operating Costs to Operating Income (BOPO) influence Profitability (ROA and NPM) of KBMI Bank 1 for the 2020-2022 Period," can be accepted.

This finding supports the results of previous research conducted by Pinasti and Mustikawati (2018), which stated that the BOPO variable had a negative and significant effect on profitability. In this context, BOPO has a negative effect, indicating that an increase in BOPO, which reflects a decrease in efficiency, can lead to a decrease in profitability. High efficiency in a bank, on the other hand, can improve performance and public trust in the bank. According to Bank Indonesia, the desired BOPO ratio is below 85%, because if the ratio exceeds 85%, the bank can be considered inefficient in carrying out its operations.

**The Effect of Loan to Deposit Ratio (LDR) on Profitability**

The results of the t test statistical analysis for the Loan to Deposit Ratio (LDR) variable show that the significance value is 0.924, greater than the significance level $\alpha = 0.05$. Therefore, the Loan to Deposit Ratio (LDR) does not have a significant influence on ROA Profitability. A similar thing happened in the analysis of NPM profitability, where the t test results for the Loan

to Deposit Ratio (LDR) variable showed a significance value of 0.503, which is greater than α = 0.05. Thus, the third and fourth hypotheses which state "Loan to Deposit Ratio (LDR) influences Profitability (ROA and NPM) of Bank KBMI 1 for the 2020-2022 Period" are rejected.

This finding is in line with the results of research conducted by Widyastuti and Aini (2021), which stated that the Loan to Deposit Ratio (LDR) or Loan to Funding Ratio (LFR) had no effect on bank profitability. This phenomenon can be caused by a lack of application of the precautionary principle by bank management in assessing prospective customers who apply for financing (Nurfitriani, 2021). Whether the size of a bank's LDR is large or small does not have an impact on the level of profitability, considering that large or small loans are not supported by adequate credit quality. Banks can face increased risks if credit provision is not carried out carefully and expansion in credit distribution is not controlled.

**The Effect of Non Performing Loans (NPL) on Profitability**

The results of the statistical t test for the Non Performing Loan (NPL) variable indicate that the significance value reached 0.379, which is greater than the confidence level α = 0.05. Therefore, it can be concluded that Non Performing Loans (NPL) do not have a significant influence on Profitability Return On Assets (ROA). Likewise, in the context of Net Profit Margin (NPM) profitability, the results of the statistical t test for the Non Performing Loan (NPL) variable show a significance value of 0.437, which also exceeds the confidence level of α = 0.05. Thus, the fifth and sixth hypotheses which claim that "Non Performing Loans (NPL) have an influence on the Profitability (ROA and NPM) of Bank KBMI 1 for the 2020-2022 Period" are rejected.

Based on the results of hypothesis testing, it can be concluded that Non-Performing Loans (NPL) do not have a significant influence on the level of profitability. NPL reflects the ability of bank management to handle problem loans provided by the bank. The maximum limit set by Bank Indonesia for NPL is 5%. In this context, NPLs do not have a significant impact on profitability. Therefore, when there is a problem with credit at a bank, this does not cause a decrease in profits for the bank. The lower the NPL level of a bank, the better the bank's credit quality, resulting in a smaller number of problem loans. A low NPL level allows banks to be in a more controlled problematic condition. Problematic credit refers to credit with substandard, doubtful and bad quality. Neither high nor low NPL ratios affect the profitability ratio, because the smaller the number of customers who do not pay their obligations, the bank's income from credit interest does not fluctuate. This finding is in line with the results of research conducted

by Rembet and Baramuli (2020), which stated that the NPL ratio does not have a significant impact on profitability, especially Return on Assets (ROA).

## CONCLUSION

From the results of the tests and analysis that have been carried out, it can be concluded that BOPO, LDR (LFR) and NPL have a significant influence together on the profitability of Bank KBMI 1. Meanwhile, BOPO shows a significant negative influence on profitability both from the ROA and NPM ratios. Bank KBMI 1. Meanwhile, LDR (LFR) and NPL have no effect on the profitability of Bank KBMI 1, both in terms of ROA and NPM ratios. This research has several limitations that can affect the results. One of the limitations of this research is the coefficient of determination test, where the Adjusted R Square (R2) value, especially for the independent variable on NPM profitability, can only explain 27.8%. This means that the remaining 72.2% can still be explained by other factors that might influence bank profitability.

Based on the summary of research findings and limitations previously explained, several suggestions that can be given are as follows:

1. For Companies or Banks

    Banks should pay attention to and maintain the BOPO ratio so that it remains in accordance with applicable regulations. This is because the BOPO ratio can reflect the level of bank performance efficiency. By increasing the level of efficiency, it is hoped that banks can achieve a better level of profitability.

2. For Further Research

    Future research should consider adding additional year periods to expand the sample, so as to provide more representative and accurate data. The use of different profitability variable measurements, such as Return on Equity (ROE) or Operating Profit Margin (OPM), can be a relevant alternative. In addition, research can consider increasing the time span and sample size to obtain richer data and more reliable research results.

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