

The Effect of Credit Distribution, Operating Costs, Operating Income and Credit Interest Rates on the Financial Performance of Indonesian Banking

Rochman Arif^{1*}, Bandi², Agung Nur Probahudono³, Djuminah⁴

¹Department of Economy and Business, Islamic University of Lamongan, Indonesia

^{2,3,4}Department of Economics and Business, Sebelas Maret University, Indonesia

Corresponding Author: Rochman Arif rochmanarif@unisla.ac.id

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ABSTRACT

This study aims to determine the effect of credit distribution, Operating Costs Operating Income and credit interest rates on profitability in banking companies listed on the Indonesia Stock Exchange in 2020-2022. This study is quantitative using multiple linear regression analysis techniques and descriptive statistical analysis methods. The study population was 47 banking companies, with a total research sample of 90 for 3 (three) periods. The results of the study indicate that the credit distribution variable has a significant effect on the profitability variable, the Operating Costs Operating Income variable has a significant effect on the profitability variable, while the credit interest rate variable has no effect on the profitability variable.

INTRODUCTION

Several major banks recorded extraordinary net profits during the ongoing economic recovery due to the Covid-19 pandemic. Economic recovery strengthened in 2021 along with the growth of international trade, although Covid-19 has subsided significantly, it does not mean that Covid-19 is completely over. Indonesia experienced a transition process from pandemic to endemic in 2022, and the endemic status was officially determined by the president in 2023 in Presidential Decree Number 17 of 2023 concerning the Determination of the End of the Corona Wrus Disease 2019 (Covid-19) Pandemic Status in Indonesia. During the recovery period, the performance of major banks had a gap with other businesses in various sectors that were still trying to recover from the slump in business due to the Covid-19 pandemic. This phenomenon raised questions from the public. The skyrocketing profits of banking companies were due to the NIM (Net Interest Margin) which reached 4.4%. The increasing NIM or net interest margin made the company's profits even greater. NIM or interest rate margin is influenced by the amount of interest rates, both credit and funds, as well as the volume of credit distribution (Yogatama, 2023).

Fluctuations in bank interest rates are influenced by Bank Indonesia's (BI) benchmark interest rate, while NIM fluctuations follow interest rate fluctuations. However, during the 2019-2022 period, BI's benchmark interest rate was between 3.5% -6% and NIM was relatively stable in the range of 4.5% -5%. This happened because banks deliberately made NIM stable by increasing the difference between credit interest rates and fund interest rates when credit distribution volumes decreased. So, even though there was a decrease in credit distribution volumes, banking NIMs remained high. This is what caused banks to continue to make large profits during the Covid-19 pandemic. This is because banking management is burdened with high dividend targets, even though it would be more beneficial to distribute low-interest credit than dividends from state-owned banks in order to restore the real sector (Yogatama, 2023).

The main objective of a banking company is to seek profit. A company's ability to make a profit can be seen through its profitability. According to Kasmir (2016), profitability is the difference between the amount of income and the amount of costs, with the provision that the amount of income must be greater than the amount of costs. Profitability is influenced by internal and external factors, internal factors that affect profitability consist of capital adequacy, credit risk, operational efficiency, and credit distribution, while external factors of profitability consist of inflation, interest rates, and exchange rates.

Credit distribution dominates the allocation of bank funds, where the use of funds reaches 70% to 80% of the bank's business volume (Wiralaga et al., 2022). This makes credit distribution activities the main source of bank income in the form of interest income. Banking companies aim to seek maximum profit with efficient use of resources. This can be achieved if the bank can implement operational efficiency properly. Operational efficiency is measured using the BOPO (Operational Costs - Operational Income) ratio. Maria (2015) defines BOPO as a comparative measuring tool between operational costs and operational income to determine the level of company efficiency. Other sources

of bank income come from interest payments by customers to the bank. Interest is part of the loan that must be paid to the lender by the borrower as a price for using the loan (Ismanto et al., 2019). According to Boediono (2014), the interest rate is a price that must be paid for the use of loan funds, in determining the interest rate, the bank must comply with government policy regarding the BI Rate.

Previous research conducted by Anggraeni and Siahaan (2021) on the effect of credit distribution and operating expenses on operating income on profitability in BUMN in Indonesia showed that credit distribution had a significant effect on BUMN profitability, and BOPO had no significant effect on BUMN profitability. In a study on the effect of operating costs, operating income and BI interest rates on company profitability conducted by Putri., et al. (2021) stated that credit distribution did not affect profitability, BOPO affected profitability, and BI interest rates (BI Rate) did not affect profitability in banking companies listed on the Indonesia Stock Exchange 2017-2019.

Based on the phenomenon of the emergence of a gap in company profitability that has been described previously and the inconsistency of results in previous studies, it is necessary to conduct further research on profitability and develop research by combining several variables. So that researchers are interested in conducting research and writing a thesis entitled "The Effect of Credit Distribution, Operating Costs Operating Income , and Credit Interest Rates on Profitability in Banking Companies Listed on the Indonesia Stock Exchange in 2020-2022".

THEORETICAL REVIEW

This study uses signal theory. Signal theory according to Fauziah (2017), is a theory that focuses on a signal or reference from the existence of financial reports. According to Khairudin and Wandita (2017), signal theory is a signal or information needed by investors for investment purposes. Meanwhile, Houston., et al. (2011) defines signal theory as a signal from a company's actions to provide investors with instructions regarding the company's prospects. In banking companies, the parties involved in this theory are management (internal parties who provide signals) and investors (external parties who receive signals). Signaling theory is used in research on the effect of BOPO implementation on profitability in banking companies listed on the IDX by Prena and Nareswari (2022). Anggraeni and Siahaan (2021) also used signaling theory in their research on the effect of credit distribution and Operating Expenses to Operating Income (BOPO) on Profitability in BUMN in Indonesia. Signaling theory is also used in research by Putri., et al. (2021) regarding the effect of Loan to Deposit Ratio (LDR), Operating Expenses to Operating Income (BOPO), and BI interest rates on company profitability. All of these studies state that signaling theory provides signals in the form of information, namely financial reports, to external parties, namely investors. According to Kaismir (2016), profitability is the difference between the number of sales and the total costs, provided that the number of sales must be greater than the total costs.

METHODOLOGY

This type of research uses a quantitative approach method. The dependent variable used in this study is profitability. The indicator used to measure profitability is Return on Asset (ROA). The independent variables in this study are credit distribution, Operating Costs Operating Income , and credit interest rates. The indicator for measuring credit distribution as an independent variable (X1) is the Loan to Deposit Ratio (LDR). According to the financial dictionary, BOPO as an independent variable (X2) is a ratio that compares operating costs with operating income. The indicator for calculating credit interest rates as an independent variable (X3) is the BI Rate percentage.

The type of data used in this study is secondary data whose data collection uses the documentation method. The source of secondary data comes from financial report data from banking companies for the period 2020-2022 which can be downloaded from the official website of the Indonesia Stock Exchange, namely www.idx.co.id. In measuring the level of credit interest rates, researchers obtained BI Rate data from the official website of Bank Indonesia, namely www.bi.go.id. The research population used was all banking companies listed on the Indonesia Stock Exchange totaling 47 companies. The research sample was taken using the purposive sampling technique, so that a sample of 30 companies was obtained. The data analysis technique in this study is multiple linear regression analysis. The data analysis method used is descriptive statistical analysis. This data analysis was carried out using the help of statistical software, namely SPSS (Statistical Package for the Social Science). The data analysis technique used starts from the classical assumption test consisting of the normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test. For hypothesis testing, the t-test and coefficient of determination were carried out. There are three hypotheses in this study, including:

- H1: It is suspected that credit distribution has a significant impact on the profitability of banking companies listed on the Indonesia Stock Exchange in 2020-2022.
- H2: It is suspected that Operating Costs and Operating Income have a significant effect on the profitability of banking companies listed on the Indonesia Stock Exchange in 2020-2022.
- H3: It is suspected that the level of credit interest rates has a significant effect on the profitability of banking companies listed on the Indonesia Stock Exchange in 2020-2022.

RESULTS

Descriptive Statistical Analysis

Table 1. Descriptive Statistics of Research Data

| | N | Minimum | Maximum | Mean | Std. Deviation |
|--------------------|----|---------|---------|----------|----------------|
| LDR | 90 | .1217 | 2.9302 | .948485 | .4779262 |
| BOPO | 90 | -2.0753 | -.1142 | -.446938 | .3038917 |
| Flower Tribe | 90 | .0350 | .0550 | .042500 | .0089474 |
| ROI | 90 | .0002 | .0414 | .011483 | .0093527 |
| Valid N (listwise) | 90 | | | | |

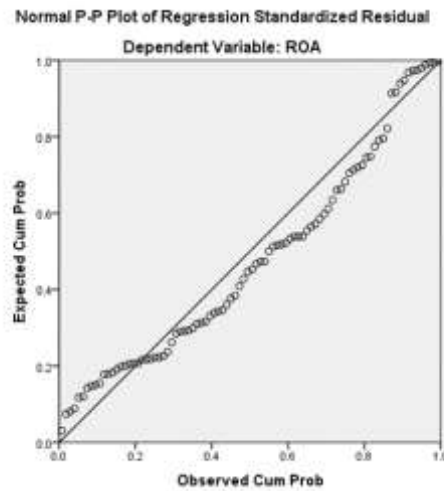
Source: Data processed by SPSS, 2024

Table 1. shows the results of descriptive analysis tests on 30 companies over a period of 3 years. The following results were obtained:

- a. The LDR variable or credit distribution has a minimum value of 0.1217, a maximum value of 2.9302, an average of (*mean*) of 0.948485, and a standard deviation of 0.4779262, which is below the average value, so that the LDR variable or credit distribution has a low level of data variation.
- b. The BOPO variable has a minimum value of -2.0753, a maximum value of -0.1142, an average of (*mean*) of -0.446938, and a standard deviation of -0.3038917, which is above the average value, so that the BOPO variable has a high level of data variation.
- c. Credit interest rate variable or *BI Rate* has a minimum value of 0.0350, a maximum value of 0.0550, an average (*mean*) of 0.042500, and a standard deviation of 0.0089474 which is below the average value, so the *BI Rate* variable has a low level of data variation.
- d. The ROA or profitability variable has a minimum value of 0.0002, a maximum value of 0.0414, an average of 0.0002. (*mean*) of 0.11483, and a standard deviation of 0.0093527, which is below the average value, so that the ROA or profitability variable has a low level of data variation.

Classical Assumption Test

1. Normality test



Source: Data processed by SPSS, 2024

Figure 1. Results of the PP Plot of Regression Standardized Residual Normality Test

Figure 1 shows the results that the points (data) are around the diagonal line and in the same direction as the diagonal line, so it can be concluded that this regression model meets the requirements for normality.

Table 2. Results of the One Sample Kolmogorov-Smirnov Test

| | | Unstained Residue |
|--------------------------|----------------------------|-----------------------|
| N | | 90 |
| Normal Pairwise | Mean Std. Deviation | 0E-7 .00837862 |
| Most Extreme Differences | Absolute Positive Negative | .105 .105 -.072 |
| Kolmogorov-Smirnov Z | | .998 |
| Asymp. Sig. (2-tailed) | | .272 |

Source: Data processed by SPSS, 2024

Table 2. shows the significance value or Asymp. Sig. (2-tailed) of 0.272 which is greater than α of 0.05, so it can be concluded that the data tested is normally distributed.

2. Multicollinearity test

Table 3. Multicollinearity Test Results
 Coefficientsai

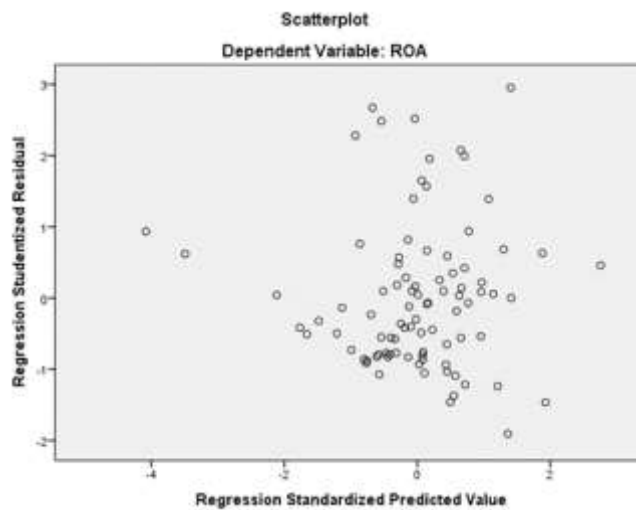
| Model | Collinearity Statistics | |
|--------------|-------------------------|-------|
| | Tolerance | VIF |
| 1 LDR | .994 | 1,006 |
| BOPO | .997 | 1.003 |
| Flower Tribe | .995 | 1.005 |

a. Dependent Vaenvyaible: ROI

Source: Data processed by SPSS, 2024

In table 3, the values obtained are *variable tolerance* LDR or credit distribution of 0.994, BOPO value of 0.997, and credit interest rate or BI Rate of 0.995 is greater than 0.1. The VIF value of the LDR variable or credit distribution is 1.006, BOPO of 1.003, and credit interest rate or BI Rate of 1.005 which is smaller than 10, so the conclusion is that there is no multicollinearity.

3. Heteroscedasticity test



Source: Data processed by SPSS, 2024

Figure 2. Scatterplot Test Results

In Figure 2, it can be seen that the points are spread away from the diagonal line 0, so it can be said that there are no symptoms of heteroscedasticity in the regression model used.

Table 4. Glejser Test Results
Coefficients^a

| Model | Unstained-Dairy Coefficients | | Stairdairdi t | Sig. | |
|--------------|------------------------------|------------|---------------|-------|------|
| | B | Std. Error | Beta | | |
| (Constant) | .003 | .003 | | 1,007 | .317 |
| 1 LDR | .001 | .001 | .134 | 1.255 | .213 |
| BOPO | .000 | .002 | -.019 | -.178 | .859 |
| Flower Tribe | .043 | .063 | .073 | .681 | .498 |

a. Dependent Variable: ABRESID

Source: Data processed by SPSS, 2024

In table 4, the significance value of the LDR variable or credit distribution is 0.213, the BOPO variable is 0.859, and the credit interest rate variable or BIRate of 0.498. All significance values of the variables are greater than 0.05, which means that there are no symptoms of heteroscedasticity in the regression model used.

4. Autocorrelation test

Table 5. Autocorrelation Test Results
Summary Model

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|-------|------|----------|-------------------|----------------------------|---------------|
| 1 | .444 | .197 | .169 | .0085235 | 1.418 |

a. Predictors: (Constant), Suku Bungai, BOPO, LDR

b. Dependent Variable: ROAI

Source: Data processed by SPSS, 2024

In table 5, the Durbin-Watson (DW-Test) value is 1.418, which means it is greater than -2 and less than +2 ($-2 < 1.418 < +2$), so there is no autocorrelation in the regression model.

Multiple Linear Regression Analysis

Table 6. Multiple Linear Analysis Test Results
Coefficients^{ai}

| Model | Unstained-Dairy Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
|---------------|------------------------------|------------|---------------------------|-------|------|-------------------------|-----------|
| | B | Std. Error | | | | Beta | Tolerance |
| (Constant) | .006 | .005 | | 1.156 | .251 | | |
| 1 LDR | .006 | .002 | .300 | 3,099 | .003 | .994 | 1,006 |
| BOPO | .010 | .003 | .316 | 3.262 | .002 | .997 | 1.003 |
| INTEREST RATE | .109 | .101 | .105 | 1,081 | .283 | .995 | 1.005 |

a. Dependent Variable: ROA

Source: Data processed by SPSS, 2024

Table 6 shows that the coefficient for the LDR variable is 0.006, BOPO is 0.010, and BI is 0.109. The following is the mathematical equation for multiple linear regression analysis in this study:

$$ROA = \alpha + \beta_1 LDR + \beta_2 BOPO + \beta_3 BI \text{ Rate}$$

$$ROA = 0.006 + 0.006 LDR + 0.010 BOPO + 0.109 BI \text{ Rate}$$

Based on the mathematical equation, the following explanation is obtained:

1. The constant value is 0.006, if all independent variables have a value of 0, then the dependent variable will have a fixed value of 0.006.
2. The coefficient of the LDR variable (X1) is 0.006, if the LDR variable increases by 1 unit while the other independent variables remain constant, then the LDR will increase by 0.006, and vice versa if the LDR decreases by 1 unit, it will cause a decrease in the LDR by 0.006.
3. The coefficient of the BOPO variable (X2) is 0.010. If the BOPO variable increases by 1 unit while other independent variables remain constant, then BOPO will increase by 0.010, and vice versa if BOPO decreases by 1 unit, it will cause a decrease in BOPO by 0.010.
4. BI variable coefficient (X3) of 0.109. If the BI Rate variable increases by 1 unit while other independent variables remain constant, the BI Rate will increase by 0.109, and vice versa if the BI Rate decreases by 1 unit, it will cause a decrease in the BI Rate by 0.109.

Hypothesis Testing

1. t-test

Table 7. t-Test Results

| Model | Unstained Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
|---------------|------------------------|------------|---------------------------|-------|------|-------------------------|-----------|
| | B | Std. Error | | | | Beta | Tolerance |
| (Constant) | .006 | .005 | | 1.156 | .251 | | |
| LDR | .006 | .002 | .300 | 3,099 | .003 | .994 | 1,006 |
| BOPO | .010 | .003 | .316 | 3.262 | .002 | .997 | 1.003 |
| INTEREST RATE | .109 | .101 | .105 | 1,081 | .283 | .995 | 1.005 |

a. Dependent Variable: ROA

Source: Data processed by SPSS, 2024

In this study, t_{table} calculated using the formula $(\alpha/2; nk-1) = (0.05/2; 90-3-1) = (0.025; 86)$, so that the t_{table} is 1.98793. Based on table 7. above, the following explanation is obtained:

a. Hypothesis testing of credit distribution on profitability

Based on the results of the t-test, the calculated t value = 3.099 is greater than $t_{table} = 1.988$, and the significance value is $0.003 < 0.05$. In conclusion, the credit distribution variable has a significant effect on profitability.

b. Hypothesis testing of Operating Costs Operating Income on profitability

Based on the results of the t-test, the t-value = 3.262 is greater than $t_{table} = 1.988$, and the significance value is $0.002 < 0.05$. In conclusion, the BOPO variable has a significant effect on profitability.

c. Hypothesis testing of credit interest rates on profitability

Based on the results of the t-test, the calculated t value = 1.081 is smaller than $t_{table} = 1.988$, the significance value is $0.283 > 0.05$. In conclusion, the credit distribution variable does not affect profitability.

2. Coefficient of determination

Table 8. Results of the Determination Coefficient Test

| Model | R | R Square | AAdjusted R Squaire | Std. Error of the Estimate | Durbin-Waitson |
|-------|--------|----------|---------------------|----------------------------|----------------|
| 1 | .444ai | .197 | .169 | .0085235 | 1.418 |

a. Predictors: (Constaint), Suku Bungai, BOPO, LDR

b. Dependent Variable: ROA

Source: Data processed by SPSS, 2024

In table 8. shows the value *Adjusted R Square* of 0.169 or 16.9%, meaning that the ability of all independent variables to influence the dependent variable is 16.9%, while the remainder, namely 83.1%, is influenced by other variables outside this study.

DISCUSSION

Based on the research results, lending has a significant effect on profitability in banking companies listed on the Indonesian Stock Exchange in 2020-2022. This is due to the activity of returning credit by debtors to creditors accompanied by pre-agreed interest payments. This interest income is the largest income of a bank that can increase profitability. In 2021, Bank Maindiri (BMRI) has an ideal lending rate of 87% which affects profitability by 1.7%. In 2022, banking companies that have an ideal level of lending in influencing the level of profitability are Bank Mestika (BBMD), Bank Negara Indonesia (BBNI), Bank Mandiri (BMRI), Bank CIMB Niaga (BNGA), and Panin Bank (PNBN). The first hypothesis (H1) is accepted.

This hail is in line with research on the effect of lending on profitability in the banking industry in Indonesia Saiprinai (2023) which shows the results of research that lending has a significant effect on profitability. Another study conducted by Khaieru (2023) on the impact of credit distribution on banking profitability concluded that credit distribution has an effect on ROAI. Research by AInggraeni and Siahaan (2021) on the effect of lending on the profitability of in Indonesia found that lending variables have a significant effect on bank profitability variables.

The effect of operating costs and operating income on profitability

Based on the results of the study, Operating Expenses for Operating Income (BOPO) has a significant effect on profitability in banking companies listed on the Indonesian Stock Exchange in 2020-2022. This is due to companies that can achieve profitability if BOPO decreases. In a banking company, in addition to earning interest income, a bank must also incur interest expenses for deposit interest. Interest expenses must not be greater than interest income so that the company does not experience losses. The decrease in the BOPO ratio affecting profitability

occurred at Bank Central Asia (BBCAI) during 2020 to 2022, at Aillo Bank Indonesia (BBHI) in 2021, at Bank Mestika (BBMD) during 2020 to 2022, at Bank Negara Indonesia (BBNI) in 2022, paidai Bank Raikyait Indonesia (BBRI) in 2021 and 2022, at Bank Indonesia (BBSI) during 2020 to 2022, to Bank Danamon Indonesia (BDMN) in 2022, to Bank Jatim (BJTM) during 2020 to 2022, to Bank Mandiri (BMRI) in 2021 and 2022, to Bank CIMB Niaga (BNGA) in 2022, to Bank BTPN in 2021 and 2022, to Bank MEGA during 2020 to 2022, to Panin Bank (PNBN) in 2022, and to Bank Woori Saudara Indonesia 1960 (SDRAI) in 2022. The second hypothesis (H2) is accepted.

This hail is supported by Alistuti's research (2022) on the effect of BOPO on Islamic banking profitability which concluded that the BOPO variable has a significant effect on profitability. Difai, et al (2022) in their research on the effect of BOPO on the profitability of Islamic Public Banks in Indonesia also stated the research results that BOPO has a significant effect on profitability. Chaindra and AIngraini's research (2020) on the effect of BOPO on the profitability of banks listed on the IDX in 2012-2018 also shows that BOPO has an effect on profitability. The credit interest rate is the interest that must be repaid for the use of money that will be paid at a certain period of time (Naizhifaih, 2021). In setting lending rates, banks cannot exceed the BI Rate set by Bank Indonesia, the higher the bank sets the lending rate, the higher the interest income earned so that it can increase the profitability of banking companies, profitability is the company's ability to earn profits (Prihaidi, 2019). Supposedly the higher the interest rate can increase profitability growth, but based on the results of the study, the lending rate has no effect on profitability in banking companies listed on the Indonesia Stock Exchange in 2020-2022. The results showed that the credit interest rate did not affect profitability due to the high interest rate, thus minimising consumer or customer interest in taking credit at the bank, which as a result will result in idle funds (idle money) which can reduce the bank's potential to earn income.

CONCLUSIONS AND RECOMMENDATIONS

1. Credit distribution has a significant effect on profitability in banking companies listed on the Indonesia Stock Exchange in 2020-2022. The increase in company profitability is influenced by the increase in credit distribution volume, this is due to credit returns due to credit distribution activities involving interest payments, interest income received by the bank will increase the company's profitability. The first hypothesis (H1) is accepted.
2. Operating Costs Operating Income has a significant effect on profitability in banking companies listed on the Indonesia Stock Exchange in 2020-2022. The increase in profitability of banking companies is influenced by the decrease in the BOPO ratio, this is due to the activities of banking companies that require operational costs and interest costs as a consequence of loans made by the company. Banking companies can be said to be efficient in achieving profitability if they can minimize operational costs against operational income. The second hypothesis (H2) is accepted.
3. The level of credit interest rates does not affect profitability in banking companies listed on the Indonesia Stock Exchange in 2020-2022. This is due to

the high interest rate, thus minimizing the interest of consumers or customers to take credit at the bank, which can result in idle funds (idle money) which can reduce the bank's potential to earn income. The third hypothesis (H3) is rejected.

It is recommended from the results of this study for policymakers in banking to optimize credit distribution to increase banking profitability, From the results of this study, it is recommended for banking stakeholders to pay more attention to the comparison between operational costs and operational income. Banks that are able to effectively and efficiently control the difference between operational costs and operational income will have a significant impact on improving financial performance considerably.

FURTHER STUDY

It is recommended for further research to consider Islamic banking as the research object, as Islamic banking has different financial instruments compared to conventional banking. It is recommended for future research to consider other variables that have an impact on financial performance. It is recommended for further research to add banking samples from countries other than Indonesia, so that the results of this study are more generalizable.

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