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# The influence of Capital Adequacy Ratio, Third-Party Funds, Operating Cost to Operating Income Ratio, Loan-to-Deposit Ratio, Non-Performing Loans, and fintech adoption on bank performance

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**Abstract**

*This paper investigates the impact of Capital Adequacy Ratio (CAR), Third Party Funds, Operating Expenses to Operating Income Ratio, Loan-to-Deposit Ratio (LDR), Non-Performing Loans (NPL), and fintech adoption on bank performance, of banks in Indonesia across 107 banks grouped into 4 KBMI categories. The data period for our study is from October 2021 to March 2022. The performance of banks in this paper is measured by ROA (Return on Assets) and NIM (Net Interest Margin). We employ regression analysis for our study. Our main findings are as follows. First, we found that CAR, Third Party Funds, Operating Expenses to Operating Income Ratio, LDR, NPL, significantly influence ROA, while fintech adoption does not significantly affect ROA. Second, we found that CAR, Third Party Funds, NPL, and Operating Expenses to Operating Income Ratio significantly influence NIM, whereas the adoption of DPK and fintech does not significantly affect NIM. Finally, our control variables indicate that inflation significantly influences ROA, while inflation towards NIM and growth towards ROA and NIM do not significantly affect them.*

**Key word: profitability, performance, banking, fintech**



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## INTRODUCTION

The level of inflation is one of the factors used to measure the economy of a country (Chen et al., 2020). There are several factors that influence the development of a nation's economy, one of which is the banking sector. The presence of banking entities helps control cash flow and shapes assets in the economy; the financial stability of a country is also an important topic where the performance of the banking sector or overall bank performance plays a crucial role (Zeqiraj et al., 2021). There are several indicators of bank performance, including Return on Asset (ROA) and Net Interest Margin (NIM) (Rakshit & Bardhan, 2022). Their research indicates that macroeconomic indicators influence the profitability of banks. Banks, being the heart of the economy, need to be stable to maintain the economic stability of a country. Based on previous research, the performance of banks can be influenced by several factors, namely Capital Adequacy Ratio (CAR), Third-Party Funds, Operating Expenses to Operating Income Ratio, Loan to Deposit Ratio (LDR), Non-Performing Loan (NPL) (Monika et al., 2021) (Brastama & Yadnya, 2020) (Anggari & Dana, 2020)(Pujiati et al., 2020), and macroeconomic variables such as economic growth and inflation that are beyond management control (Leon, 2020). Additionally, there is another factor expected to impact bank performance, namely the adoption of financial technology (Fintech) (Singh et al., 2021).

Financial technology (Fintech) is a combination of technology and financial services; the increasing development of technology over time has an impact on how the financial industry conducts its business activities (Goldstein et al., 2019). Financial technology lays the foundation that enables financial transactions through mobile phones and/or computers (Bateman, 2020). Activities included in financial technology encompass crowdfunding, mobile payments, robo-investing, money transfers, and peer-to-peer lending that have been occurring in recent years (Goldstein et al., 2019).

Many studies have been conducted in the field of bank performance, some of which include (Monika et al., 2021), (Brastama & Yadnya, 2020), (Pujiati et al., 2020). However, previous research has used ROA and ROE as proxies for bank performance. This study brings novelty by proposing ROA and NIM as proxies or indicators of bank performance. Additionally, we also examine other factors influencing bank performance, and our research aims to provide empirical analysis on the adoption of financial technology by banks and its impact on bank performance (ROA and NIM).



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## THEORY

Bank performance is one of the indicators used to measure the performance of a banking entity. Bank performance can be proxied by Return on Asset (ROA) and Net Interest Margin (NIM) (Phan et al., 2018) (Rakshit & Bardhan, 2022). The financial stability of a country can be influenced by the performance of the banking sector, which contributes significantly to the economy (Zeqiraj et al., 2021).

### Capital Adequacy Ratio (CAR) to ROA and NIM Ratio.

The Capital Adequacy Ratio (CAR) is a ratio used to measure the capital and provisions to cover credit defaults and unpaid interest (Anggriani & Muniarty, 2020). Furthermore, CAR is a fundamental measure of the strength and health of a bank (Abba et al., 2018). CAR is a ratio that indicates the overall risk-weighted assets financed by capital, in addition to funds from sources other than the bank, such as funds from the public, loans, and others (Tangngisalu et al., 2020). Based on previous research, CAR significantly influences ROA (Brastama & Yadnya, 2020). If uncollectible interest can be covered by the bank entity, it indicates that the bank is performing well. The good performance of a bank can be reflected in the high values of ROA and NIM. Therefore, in line with the research by Brastama & Yadnya (2020), it is indicated that CAR has an impact on ROA and NIM.

H1: CAR has an effect on ROA (Return on Assets).
H2: CAR has an effect on NIM (Net Interest Margin).

### Third-Party Funds to ROA and NIM.

Third-Party Funds (DPK) are a source of funding obtained by banks from deposits and savings (Anggari & Dana, 2020). Third-Party Funds represent funds used by a bank entity to cover its operations and credit disbursements (Pujiati et al., 2020). With the increase in third-party funds, the availability of funds for lending to the public also increases, leading to an improvement in the bank's performance in terms of profitability (Anggari & Dana, 2020). In this study, profitability is proxied by ROA and NIM. It can be hypothesized that an increase in third-party funds will be followed by an increase in ROA and NIM, in line with the research by Anggari & Dana (2020) and Pujiati et al. (2020). The hypotheses are as follows:


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H3: Third-Party Funds have an effect on ROA.
H4: Third-Party Funds have an effect on NIM.

**Loan to Deposit Ratio (LDR) to ROA and NIM.**

Loan to Deposit Ratio (LDR) is an indicator used to measure a bank's health from a liquidity perspective (Pujiati et al., 2020). LDR is calculated by dividing total loans by total deposits for the same period (Rajindra et al., 2021). Hasna et al. (2020) state that the higher the LDR of a bank entity, the better the bank's performance in terms of profitability with higher risk. Therefore, as the LDR increases, the banking sector provides more loans, and this means more interest payments from customers (Anggari & Dana, 2020). The bank's performance, proxied by profitability measured with ROA and NIM, can be concluded that the higher the LDR, the higher its ROA and NIM.

H5: LDR has an effect on ROA.
H6: LDR has an effect on NIM.

**Non-Performing Loan (NPL) to ROA and NIM.**

Non-Performing Loan (NPL) is the overall return rate on loans provided by a bank to non-bank debtors, used to measure problematic loans against the total loans (Anggriani & Muniarty, 2020). The NPL level reflects the stability of the banking sector in a particular country (Khan et al., 2020). A high NPL level in banking entities indicates inadequate loan approval procedures and a lack of credit monitoring policies (Khan et al., 2020). A study by Siddique et al. (2022) shows empirical evidence that NPL negatively affects the financial performance of banking. This is because the higher the level of problematic loans held by banking entities, the lower the performance of the bank. Banking performance is measured by ROA and NIM. Problematic loans lead to a decrease in interest earned by banking entities, which will reduce ROA and NIM. Therefore, it can be concluded that the hypotheses are:

H7: NPL has an effect on ROA.
H8: NPL has an effect on NIM.


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**Fintech to ROA and NIM.**

The adoption of financial technology in the banking industry will increase transactions conducted by its customers (Medyawati et al., 2021). With an increasing number of customer transactions, there will be more transactions generating fees for the bank. This is in line with research conducted by Singh et al. (2021), which shows that fintech adoption will affect bank performance, particularly in terms of profitability. Bank performance can be proxied by several indicators such as ROA and NIM. Additionally, the adoption of financial technology will influence the performance of banking entities through the convenience offered by the technology, including ease of financing and improved capabilities in financial decision-making. Consumers become aware that banks adopting financial technology have better financial technology, allowing them to switch from banks with less massive fintech adoption (Dadoukis et al., 2021). Based on the explanations above, the hypotheses are proposed as follows:

H9: Fintech has an effect on ROA.
H10: Fintech has an effect on NIM.

**Operating Costs to Operating Income Ratio to ROA and NIM**

Operational Costs to Operational Income Ratio in the study conducted by Monika et al. (2021), based on empirical evidence, has an influence on bank performance. Operational Costs to Operational Income Ratio is the ratio of operational costs (including interest cost) to operational income (including interest income) (Monika et al., 2021). Operational Costs to Operational Income Ratio affects profitability (ROA and NIM) because increasing operational costs without a corresponding increase in income will result in a decrease in profit, subsequently affecting ROA and NIM. Therefore, it can be hypothesized that:

H11: Operational Costs to Operational Income Ratio has an effect on ROA.
H12: Operational Costs to Operational Income Ratio has an effect on NIM.

**Inflation and Growth as Control Variables.**

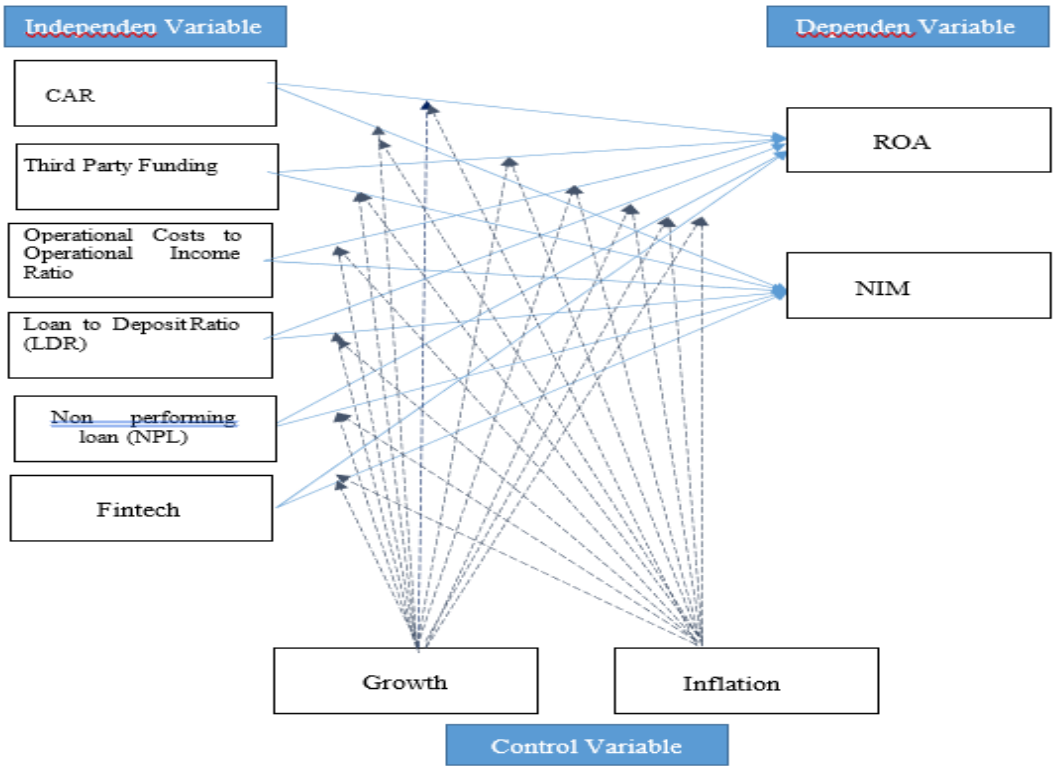
Growth impacts bank performance; the higher the growth rate, the greater the demand for credit from the public (Leon, 2020). Inflation can affect income and erode the


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value of money, thereby impacting the real asset value held (Leon, 2020). Both of these control variables are considered macroeconomic factors beyond the control of the bank. Higher growth and inflation are expected to impact bank performance.

H13: Inflation has an effect on ROA.
H14: Growth has an effect on ROA.
H15: Inflation has an effect on NIM.
H16: Growth has an effect on NIM.

**Theoretical Framework**





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## METHODOLOGY

Unit of analysis is commercial banks. Commercial banks are categorized based on the Classification of Banks Based on Core Capital (KBMI). The Financial Services Authority (OJK) as the supervisory body for banks in Indonesia replaced the Classification of Banks Based on Business Activities (BUKU) with the Classification of Banks Based on Core Capital (KBMI) in accordance with POJK No. 12/POJK.03/2021 regarding commercial banks. Therefore, the units of analysis are grouped as follows:

KBMI 1: Banks with core capital < 6 trillion.
KBMI 2: Banks with core capital between 6 trillion - 14 trillion.
KBMI 3: Banks with core capital between 14 trillion - 70 trillion.
KBMI 4: Banks with core capital > 70 trillion.

The number of banks in the study is 107 banks (as of March 2022) classified as follows:
KBMI 1: 73 banks;
KBMI 2: 18 banks;
KBMI 3: 12 banks; and
KBMI 4: 4 banks.

The research period (after transforming the grouping of banks based on core capital) is from June 2021 to March 2022. Data collection is derived from financial report summaries, Indonesian financial statistics as secondary data collected from the Bank Indonesia website, and other secondary data obtained from the Bank Indonesia and Indonesian Financial Services Authority websites. The variables used in the study are listed in the table below:

**Table 1. Operational Variable**

| Variables | Measurement |
|---|---|
| CAR | $\textbf{CAR} = \frac{\text{Own Capital}}{\text{ATMR}} \times 100\%$ |
| Third Party Funds | **Third PArty Funds** = Saving Deposit + Time Deposit + Demand Deposit + Certificated of Deposit |


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| | |
|---|---|
| NPL | **NPL** = Non Performing Loan X 100% / Total Credit |
| LDR | **LDR** = Total Credit x 100% / Third Parties Fund |
| Operational Costs to Operational Income | **BOPO** = Operational Cost X 100% / Operational Income |
| ROA | **ROA** = Earnings Before Tax (EBT) x 100% / Total Assets |
| NIM | **NIM** = Net Interest Income X 100% / Productive Assets Average |
| FINTECH | *Total fund collaborative with commercial banks* |
| INFLASI | *Inflation rate per month* |
| GROWTH | *Growth* = (GDPt – GDP t-1) / GDP t-1 |

Resources : Proceed 2022

The data analysis used is descriptive analysis based on the following steps:

1. Classical Assumptions Tests

This test aims to determine whether the data meets the requirements for linear regression testing or not. Classical assumption tests are divided into normality test, multicollinearity test, heteroskedasticity test, and autocorrelation test. Before analyzing the data or estimating the data, classical assumption tests are used to validate that the data is normally distributed.

2. Regression Test

Regression testing is conducted using t-tests and F-tests. This testing explains the relationship between independent variables and the dependent variable, which is then formulated as a multiple linear regression equation as follows:

$Y1 = \alpha + \beta1\ X1 + \beta2\ X2 + \beta3\ X3 + \beta4X4 + \beta5X5 + \beta6X6 + \beta7X7 + \beta8X8 + \varepsilon$… ..... (1)

$Y2 = \alpha + \beta1\ X1 + \beta2\ X2 + \beta3\ X3 + \beta4X4 + \beta5X5 + \beta6X6 + \beta7X7 + \beta8X8 + \varepsilon$… ..... (2)



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Notes :
Y1 = Return On Asset (ROA) commercial bank
Y2 = Net Interest Margin (NIM) commercial bank
X1 = Capital Adequacy Ratio (CAR)
X2 = Third Party Funds (DPK)
X3 = Non Performing Loan (NPL)
X4 = Operational Costs On Operational Revenur (BOPO)
X5 = Loan to Deposit Ratio (LDR)
X6 = Fintech
X7 = Inflation Rate
X8 = Growth
α = Constanta (Value Y if X1, X2, X3, X4, X5, X6, X7, dan X8 = 0)
β = Coefficient

## RESULT AND ANALYSIS

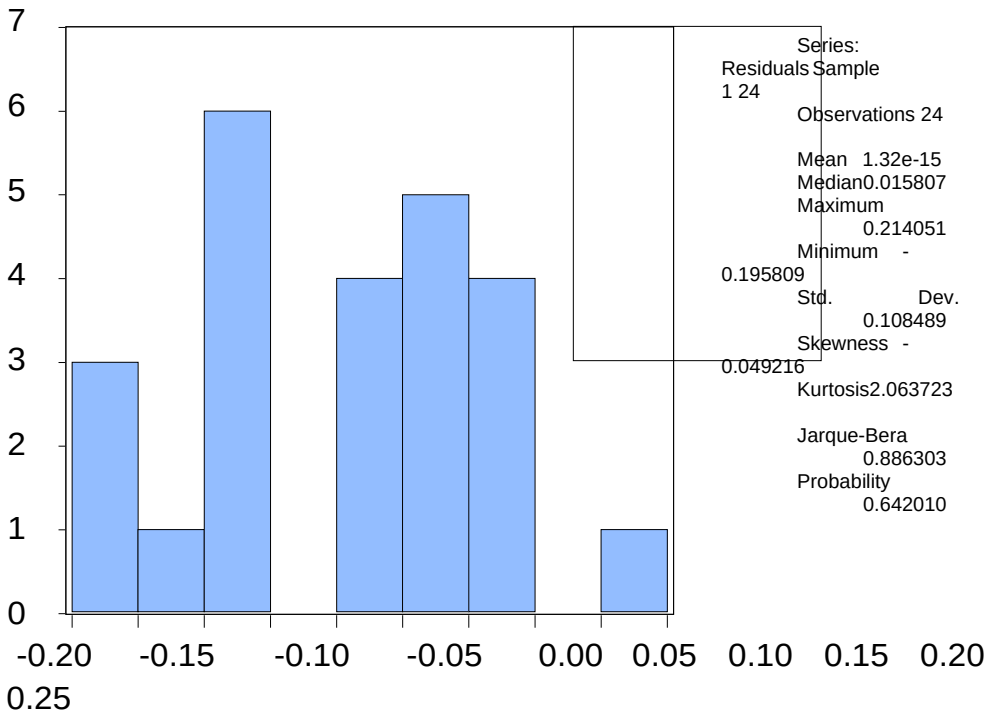
Based on the data collection, it is evident that changes in bank policies and bank ratios have an impact on bank performance. In this study, performance is measured using ROA and NIM, with economic policies used as control variables. This policy is applied based on previous research indicating that macroeconomic policies influence bank performance. Before conducting regression tests, it is essential to perform classical assumption tests.

### Classical Assumption Tests

A. Normality Tests


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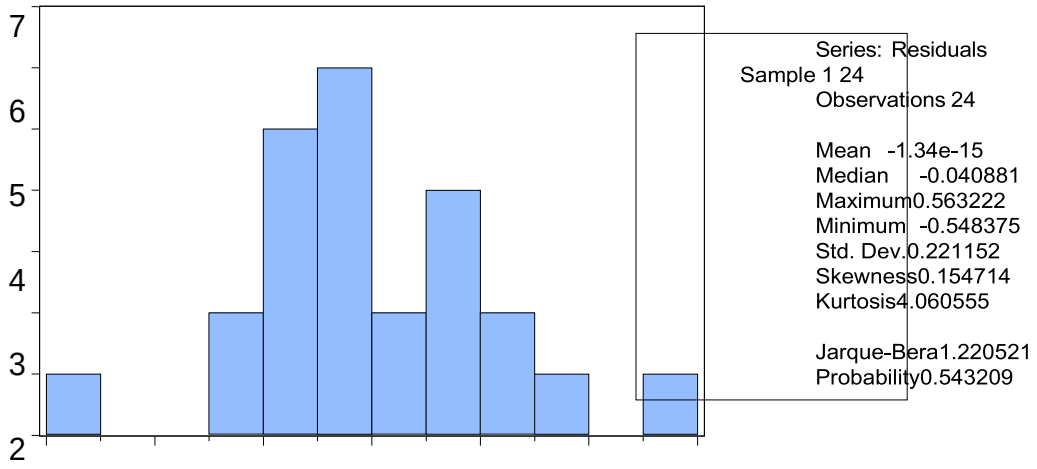



Pigure 1. Histogram – Normality Test (ROA)

The significance level used is 95% or a 5% error rate. A probability value below 5% indicates non-normal distribution, but if it is above 5% or 0.05, the data is considered normally distributed. Based on the output data, the p-value is 0.642010, indicating that the data follows a normal distribution.


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Picture 2. Histogram – Normality Test (NIM)

The transformation of banks (in this case, commercial ratios) into bank performance (NIM) as a result of the normality test measured by Jarque-Bera. Changes in bank ratios and macroeconomic policies also impact bank performance measured by the net interest margin (NIM). The normality test results, with a P-value above 0.05, indicate that the data is normally distributed, allowing for further testing.

## A. Multicollinearity Test

Variance Inflation Factors
Date: 03/10/22 Time: 08:16
Sample: 1 24
Included observations: 24

| Variable | Coefficient Variance | Uncentered VIF | Centered VIF |
|---|---|---|---|
| C | 1.154452 | 1535.254 | NA |
| CAR | 0.000105 | 114.5864 | 4.140885 |
| DPK | 1.03E-15 | 5.811794 | 1.729283 |
| NPL | 6.52E-12 | 23.98284 | 6.859732 |
| BOPO | 9.47E-05 | 925.2264 | 8.234988 |
| LDR | 6.74E-05 | 536.8976 | 1.438401 |


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| | | | |
|---|---|---|---|
| FINTECH | 6.55E-09 | 40.42160 | 2.192734 |
| INFLASI | 0.002415 | 2.544998 | 2.081306 |
| GROWTH | 0.004832 | 124.3900 | 2.799050 |

Picture 3. Variance Inflation Factors (ROA and NIM)

The multicollinearity test can be observed from the output of the Variance Inflation Factor (VIF), which indicates that if the VIF value is less than 10, it means there is no multicollinearity in the estimation or prediction of data. The VIF values for the dependent variables ROA and NIM are all below 10, indicating that all independent variables do not experience multicollinearity. Since the independent variables for the dependent variable ROA and the dependent variable NIM are the same, the VIF results are also the same.

**B. Heteroskedasticity Test**

| | | | |
|---|---|---|---|
| F-statistic | 1.855829 | Prob. F(8,15) | 0.1438 |
| Obs*R-squared | 11.93834 | Prob. Chi-Square(8) | 0.1540 |
| Scaled explained SS | 2.480291 | Prob. Chi-Square(8) | 0.9626 |

Picture 4. Heteroskedasticity Test: Breusch-Pagan-Godfrey (ROA)

The heteroskedasticity test is conducted to see if there is variance inequality in the observed residuals. The heteroskedasticity test can be performed by examining the Prob Chi-Square value. If the Prob Chi-Square value is above 0.05, then the processed data is considered homoskedastic. Here are the results of heteroskedasticity for the dependent variable NIM.

| | | | |
|---|---|---|---|
| F-statistic | 0.446097 | Prob. F(8,15) | 0.8747 |
| Obs*R-squared | 4.612619 | Prob. Chi-Square(8) | 0.7981 |
| Scaled explained SS | 2.757260 | Prob. Chi-Square(8) | 0.9487 |

Picture 5. Heteroskedasticity Test: Breusch-Pagan-Godfrey (NIM)


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The Prob Chi-Square value for the dependent variable NIM is also greater than 0.05, indicating that the data does not have heteroskedasticity. Since the data does not experience heteroskedasticity, further analytical tests can be conducted on this data.

## C. Autocorrelation Test

| | | | |
|---|---|---|---|
| F-statistic | 12.42435 | Prob. F(2,13) | 0.0010 |
| Obs*R-squared | 15.75665 | Prob. Chi-Square(2) | 0.0004 |

Picture 6. Breusch-Godfrey Serial Correlation LM Test (ROA)

The autocorrelation test is conducted to determine whether there is correlation between periods. Good data is characterized by the absence of autocorrelation. The autocorrelation test can be performed in several ways. This test can be done using the LM test, where if the chi-square probability is less than 0.05, it means there is no autocorrelation. For data with the dependent variable NIM, the results of the LM autocorrelation test are as follows:

| | | | |
|---|---|---|---|
| F-statistic | 4.493519 | Prob. F(2,13) | 0.0329 |
| Obs*R-squared | 9.809822 | Prob. Chi-Square(2) | 0.0074 |

Picture 7. Breusch-Godfrey Serial Correlation LM Test (NIM)

Similarly to the dependent variable ROA, the data for the dependent variable NIM also indicates the absence of autocorrelation. This is evident from the chi-square probability value below 0.05, signifying that the data is not autocorrelated. Therefore, we can now proceed with the regression test, as all assumption tests are free from data abnormalities.


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**D. Regression Test**

Dependent Variable: ROA
Method: Least Squares
Date: 03/10/22 Time: 04:53
Sample: 1 24
Included observations: 24

| Varible | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | 9.600696 | 1.074454 | 8.935414 | 0.0000 |
| CAR | 0.050595 | 0.010249 | 4.936428 | 0.0002 |
| DPK | -8.45E-08 | 3.21E-08 | -2.629715 | 0.0189 |
| NPL | 1.40E-05 | 2.55E-06 | 5.487922 | 0.0001 |
| BOPO | -0.088486 | 0.009731 | -9.093284 | 0.0000 |
| LDR | -0.031994 | 0.008210 | -3.897065 | 0.0014 |
| FINTECH | -3.06E-05 | 8.10E-05 | -0.378204 | 0.7106 |
| INFLASI | 0.153307 | 0.049144 | 3.119571 | 0.0070 |
| GROWTH | 0.045923 | 0.069512 | 0.660651 | 0.5189 |
| R-squared | 0.982951 | Mean dependent var | | 1.670417 |
| Adjusted R-squared | 0.973858 | S.D. dependent var | | 0.830869 |
| S.E. of regression | 0.134339 | Akaike info criterion | | -0.896897 |
| Sum squared resid | 0.270706 | Schwarz criterion | | -0.455127 |
| Log likelihood | 19.76277 | Hannan-Quinn criter. | | -0.779696 |
| F-statistic | 108.1005 | Durbin-Watson stat | | 2.924672 |
| Prob(F-statistic) | 0.000000 | | | |

Picture 8.Regression output data (ROA)


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Dependent Variable: NIM
Method: Least Squares
Date: 03/10/22 Time: 05:33
Sample: 1 24
Included observations: 24

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | 12.99243 | 2.190247 | 5.931948 | 0.0000 |
| CAR | 0.075016 | 0.020893 | 3.590497 | 0.0027 |
| DPK | 4.98E-08 | 6.55E-08 | 0.759722 | 0.4592 |
| NPL | 1.38E-05 | 5.20E-06 | 2.647356 | 0.0183 |
| BOPO | -0.068676 | 0.019836 | -3.462119 | 0.0035 |
| LDR | -0.070567 | 0.016735 | -4.216666 | 0.0007 |
| FINTECH | 2.87E-05 | 0.000165 | 0.174197 | 0.8640 |
| INFLASI | 0.077088 | 0.100178 | 0.769507 | 0.4535 |
| GROWTH | -0.090065 | 0.141698 | -0.635612 | 0.5346 |

| | | | |
|---|---|---|---|
| R-squared | 0.888732 | Mean dependent var | 4.182917 |
| Adjusted R-squared | 0.829389 | S.D. dependent var | 0.662987 |
| S.E. of regression | 0.273847 | Akaike info criterion | 0.527505 |
| Sum squared resid | 1.124886 | Schwarz criterion | 0.969275 |
| Log likelihood | 2.669944 | Hannan-Quinn criter. | 0.644706 |
| F-statistic | 14.97621 | Durbin-Watson stat | 2.823453 |
| Prob(F-statistic) | 0.000007 | | |

Picture 9. Regression output data (NIM)

Based on Figures 7 and 8, it can be proven that the hypotheses made are indicated in the following research summary table:


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**Table 2. Summary of Results**

| Hipotesis | Variabel independent | Variabel Dependent | Correlation | Signifikan |
|---|---|---|---|---|
| H1 | CAR | ROA | Positif | Signifikan |
| H2 | CAR | NIM | Positif | Signifikan |
| H3 | Third Party Funds | ROA | Negatif | Signifikan |
| H4 | Third Party Funds | NIM | Positif | Tidak Signifikan |
| H5 | LDR | ROA | Negatif | Signifikan |
| H6 | LDR | NIM | Negatif | Signifikan |
| H7 | NPL | ROA | Positif | Signifikan |
| H8 | NPL | NIM | Positif | Signifikan |
| H9 | FINTECH | ROA | Negatif | Tidak Signifikan |
| H10 | FINTECH | NIM | Positif | Tidak Signifikan |
| H11 | Operation Cost to Operation Income | ROA | Negatif | Signifikan |
| H12 | Operation Cost to Operation Income | NIM | Negatif | Signifikan |
| H13 | INFLATION | ROA | Positif | Signifikan |
| H14 | INFLATION | NIM | Positif | Tidak Signifikan |
| H15 | GROWTH | ROA | Positif | Tidak Signifikan |
| H16 | GROWTH | NIM | Negatif | Tidak signifikan |

Resources: Proceed (2022)

The regression equation from the test results can be expressed as follows:

ROA = 9.6 + 0.05*X1 - 8.45*X2+ 1.40*X3 - 0.08*X4 - 0.03*X5 –3.06*X6 + 0.15*X7 + 0.0459231343907*X8

NIM = 12.99 + 0.08*X1+ 4.98*X2 + 1.38*X3- 0.07*X4 - 0.07*X5 +2.87*X6 + 0.08*X7 - 0.09*X8


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Based on the results of the regression test, the transformation from banks to fintech is not significant for the recovery performance of banks, measured by both ROA and NIM, during the period from October 2021 to March 2022. The transformation of Third Party Funds is not significant for NIM. Similarly, with macroeconomic policies, specifically growth during that period, it is not significant for both ROA and NIM. However, inflation has a significant impact on ROA, but not on NIM. Overall, the transformation of banks, as indicated by the variables CAR, DPK, NPL, BOPO, LDR, fintech, inflation, and growth, has a significant effect on the recovery of banks, with ROA showing a 98.30% effect, while NIM shows an 88.87% effect.

## CONCLUSION

The transformation of banks that occurred during the period from October 2021 to March 2022, measured by variables such as CAR, DPK, NPL, BOPO, LDR, and inflation, has a significant impact on the recovery of bank performance, as measured by ROA. The NIM performance of banks is influenced by the transformation measured by variables CAR, NPL, BOPO, LDR, and other variables such as DPK, fintech, inflation, and growth, but these effects are not significant. Therefore, future research could consider using a longer time period, especially concerning fintech variables.

## REFERENCES

Abba, G. O., Okwa, E., Soje, B., & Aikpitanyi, L. N. (2018). Determinants of Capital Adequacy Ratio of Deposit Money Banks in Nigeria. *Journal of Accounting & Marketing*, *7*(2), 1–7.

Anggari, N. L. S., & Dana, I. M. (2020). The Effect of Capital Adequacy Ratio, Third Party Funds, Loan to Deposit Ratio, Bank Size on Profitability in Banking Companies on IDX. American Journal of Humanities and Social Sciences Research (AJHSSR), 4(12), 334–338.

Anggriani, R., & Muniarty, P. (2020). The Effect of Non-Performing Loans (NPL) and Capital Adequacy Ratio (CAR) on Profitability (ROA) at PT. Bank Central Asia (BCA), TBK. Ilomata International Journal of Management, 1(3), 121–126.

Bateman, M. (2020). Be careful what you wish for: the spectacular rise of fintech. ÖFSE-Österreichische Forschungsstiftung Für Internationale Entwicklung, 25–34.



Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

Brastama, R. F., & Yadnya, I. P. (2020). The Effect of Capital Adequacy Ratio and Non Performing Loan on Banking Stock Prices with Profitability as Intervening Variable. American Journal of Humanities and Social Sciences Research (AJHSSR), 4(12), 43–49.

Chen, H., Hongo, D. O., Ssali, M. W., Nyaranga, M. S., & Nderitu, C. W. (2020). The asymmetric influence of financial development on economic growth in Kenya: evidence from NARDL. Sage Open, 10(1), 1–17.

Dadoukis, A., Fiaschetti, M., & Fusi, G. (2021). IT adoption and bank performance during the Covid-19 pandemic. Economics Letters, 204, 1–10.

Goldstein, I., Jiang, W., & Karolyi, G. A. (2019). To FinTech and Beyond. The Review of Financial Studies, 32(5), 1647–1661.

Hasna, D. P., Ariyani, D. S., Ula, L. F., Putri, R. S., & Prayitno, H. Y. (2020). The Effect Of Third-Party Funds And Liquidity (Ldr) On Banking Profitability (Roa) (Case Study Of Bumn Banks Listed On The Indonesia Stock Exchange From 2012 To 2019). PalArch's Journal of Archeology of Egypt / Egyptology, 14(4), 2914–2927.

Khan, M. A., Siddique, A., & Sarwar, Z. (2020). Determinants of non-performing loans in the banking sector in developing state. Asian Journal of Accounting Research, 5(1), 135–145.

Leon, M. V. De. (2020). The impact of credit risk and macroeconomic factors on profitability: the case of the ASEAN banks. Banks and Bank Systems, 15(1), 21–29.

Medyawati, H., Yunanto, M., & Hegarini, E. (2021). Financial Technology as Determinants of Bank Profitability. Journal of Economics, Finance and Accounting Studies (JEFAS), 91–100.

Monika, A., Azam, A. N., & Teguh, S. I. (2021). The Impact of Fintech Development to Profitability of Islamic Bank. International Journal of Research and Review, 8(1), 250–258.

Phan, D., Narayan, P. K., & Hutabarat, A. R. (2018). DO FINANCIAL TECHNOLOGY FIRMS INFLUENCE BANK PERFORMANCE?

Pujiati, P., Kisman, Z., & Bastaman, A. (2020). Analysis of Capital Adequacy Ratio, Prime Lending Rate, and Third-Party Funds on Profitability of Commercial Banks in Indonesia, With Liquidity as Intervening Variable. Journal of Economics and Business, 3(1), 172–188.



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Rajindra, R., Guasmin, G., Burhanuddin, B., & Anggraeni, R. N. (2021). Costs and Operational Revenue, Loan to Deposit Ratio Against Return on Assets: A Case Study in Indonesia. Journal of Asian Finance, Economics and Business, 8(5), 109–115.

Rakshit, B., & Bardhan, S. (2022). DOES BANK EFFICIENCY ENHANCE BANK PERFORMANCE? EMPIRICAL EVIDENCE FROM INDIAN BANKING. Bulletin of Monetary Economics and Banking, Special Issue, 103–124.

Siddique, A., Khan, M. A., & Khan, Z. (2022). The effect of credit risk management and bank-specific factors on the financial performance of the South Asian commercial banks. Asian Journal of Accounting Research, 7(2), 182–194.

Singh, R., Malik, G., & Jain, V. (2021). FinTech effect: measuring impact of FinTech adoption on banks' profitability. International Journal of Management Practice, 14(4), 411–427.

Tangngisalu, J., Hasanuddin, R., & Hala, Y. (2020). Effect of CAR and NPL on ROA: Empirical Study in Indonesia Banks. Journal of Asian Finance, Economics and Business, 7(6), 9–18.

Zeqiraj, V., Mrasori, F., Iskenderoglu, O., & Sohag, K. (2021). Dynamic Impact of Banking Performance on Financial Stability: Fresh Evidence from Southeastern Europe. Journal of Central Banking Theory and Practice, 1, 165–181.



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