# KEY FACTORS IMPACTING PROFITABILITY IN INDONESIAN COMMERCIAL BANKS: FINANCIAL RATIO, MACROECONOMIC, AND OWNERSHIP STRUCTURE

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## Abstract

Profitability is essential for assessing company performance and attracting investors. This study aims to examine the effect of non-interest income, size, loan loss provision, capital adequacy ratio, overheads, non-performing loans, inflation, interest rate, and foreign ownership on the profitability of commercial banks in Indonesia. Using a quantitative approach, secondary data from the Indonesia Stock Exchange, Central Bureau of Statistics, Bank Indonesia, and company websites were analyzed over seven years (2017-2023) from 32 commercial banks, resulting in 224 financial statement data points. Panel data regression analysis with Eviews 12 was employed. The results indicate that non-interest income, size, inflation, interest rate, and foreign ownership do not significantly affect profitability. However, loan loss provision, capital adequacy ratio, overheads, and non-performing loans significantly impact profitability. These findings highlight the importance of managing problematic loans, maintaining a robust capital adequacy ratio, and improving operational efficiency to enhance profitability. The study suggests that company managers should also consider other factors such as financing decisions, asset utilization, tangibility, sales growth, and age to maximize profitability. Future research should explore different sectors and extend the study period to identify additional factors influencing corporate profitability, thereby providing deeper insights for strategic decision-making to improve financial performance.
**Keywords**: Commercial Banks, Financial Ratios, Profitability

## INTRODUCTION

Profitability is very important to measure company performance, financial ratio analysis makes it easy for company leaders to assess the efficiency of the company in generating profits or profits to be distributed to investors (Elgi et al., 2023). The greater the profitability of the company, the better the performance of the team within the company. Profitability is not only important for investors but also for companies to see how the company is developing so that profits can be maximized.

Banking is one of the sectors that is experiencing rapid transformation. The development of increasingly advanced technology, government policies, and customer demand will continue to develop following technological developments. The faster development makes banking much in demand by investors to invest because investors see the development of banks through return on assets (ROA).

Based on research (Khalaf et al., 2024) on factors that affect profitability, including non-interest income (NII), size, loan loss provision (LLP) capital adequacy ratio (CAR), and overhead ratio (OIR) which explains that NII, size, CAR have a significant positive effect and LLP, OIR have a significant negative effect on profitability. Indicators that affect bank profitability according to (Quy & Tuan, 2024), namely NPL, CAR, and size have a significant positive effect on ROA. according to (Mulbah et al., 2024) size and CAR have a significant positive effect on ROA.

Based on previous research, a study entitled Factors Affecting the Profitability of Commercial Banks in Indonesia (Financial Ratios, macroeconomics, and Ownership Structure) is proposed. The novelty of this article is to add other financial ratio variables, macroeconomics, and ownership structure. The financial ratio variables are non-performing loans (NPL), inflation, interest rates, and foreign ownership. The novelty of non-performing loans (NPL) is in accordance with research conducted by (Mirović et al., 2024) which states that NPL has a significant and negative effect on profitability, the results of the study explain that if NPL increases, ROA decreases.

The results of the study (Kelmendi, 2024) concluded that inflation has a positive effect on return on assets, explaining that healthy bank performance will increase banking credibility by providing confidence for customers and investors, and good financial

management will allow banks to survive in crisis conditions. The results of the study (Faheem et al., 2024a) concluded that interest rates have a positive effect on return on assets, banks can raise interest rates or tighten lending criteria for customers to minimize losses on non-performing loans to banks.

Research (Faheem et al., 2024) concluded that foreign ownership (FO) has a significant and positive effect on return on assets. An increase in FO will have a broad impact on performance as much as the increase in the bank's FO. This highlights that there is a need for policies to increase the proportion of FO on banking performance in Pakistan.

## REVIEW OF LITERATURE

### Profitability

According to (Abu Khalaf et al., 2024) when considering the main indicators used to assess financial performance, we can note the emphasis on profitability as one of the core areas. The main indicators used for profitability analysis are return on equity (ROE) and return on assets (ROA). According to (Mirović et al., 2024) the profitability of banking institutions is the same as the profitability of other companies, the issue of bank profitability is important because the success of its function not only as a financial system but also has an impact on economic growth and general welfare within a country. The most common measure of bank profitability is return on assets. According to (Annor & Obeng, 2019) profitability can be a benchmark that describes the bank's management methods so that it can competitively stand in the banking market. Banks employ this indicator to assist in assessing the profits they earn from their invested assets and equity.

### Non-Interest Income

Based on the results of research (Abu Khalaf et al., 2024) shows that Non-Interest Income has a statistically significant and positive effect on ROA in all three models conducted. The results of the study (Ozili & Ndah, 2024) showed a positive influence between non-interest income on ROA, this indicates that domestic credit to the private sector (CD) has a significant and positive influence on non-interest income of banks in Nigeria. The results of the study (Saklain & Williams, 2024) state that non-interest income has a positive influence on bank profitability.

**Size**

Based on the results of research (Abu Khalaf et al., 2024) shows that size has a positive effect on ROA in all three models conducted. The results of the study (Bilal et al., 2024) show that bank size has a negative effect on profitability using the ROA indicator. The results of the study (Mulbah et al., 2024) show a positive influence between size and profitability (ROA).

**Loan Loss Provision**

The results of the study (Abu Khalaf et al., 2024) show that loan loss provision has a negative effect on ROA in all models, this indicates that more banks allocate funds for potential loan losses. Research results (Weinechita Pelealu & Worang, 2019) show that loan loss provision affects bank profitability. The results of research (Annor & Obeng, 2019) show that this ratio has a negative effect on banking profitability in the sense that the more banks provide provisions for loan losses, it will reduce profits or gradually absorb provisions into the profit margin of the Bank.

**Capital Adequacy Ratio**

The results of research (Takahashi & Vasconcelos, 2024) show that CAR has a negative effect on profitability in commercial banks in Brazil. This means that an increase in CAR can cause a decrease in profitability and vice versa, a decrease in CAR value will cause the value of profitability to increase. Furthermore, based on the results of research (Diko, 2024) show that CAR does not affect ROA. Furthermore, the results of research (Mulbah et al., 2024) show a positive influence between CAR and ROA.

**Overhead**

Research results (Abu Khalaf et al., 2024) overhead costs show a negative effect on ROA in all models, indicating that higher operating costs have the potential to reduce asset profits. This is measured by the overhead-to-income ratio (OIR). Research results (Antwi, 2019) state that management must implement an effective system for managing its overhead because the lower the overhead costs charged to the bank, the better its performance. This ratio focuses on contrasting the bank's operating costs with the revenue generated by the financial institution. A lower OIR may mean that the bank is minimizing its business

expenses that do not contribute to its main activities. In this case, a lower OIR will contribute to a stronger performance of the financial institution (Minh & Thanh, 2020).

**Non-Performing Loan**

The results of the study (Mirović et al., 2024) show a negative influence on banking institutions between non-performing loans (NPL) and return on assets (ROA), this shows that the higher the NPL ratio, the lower the profitability. The results of the study (El Moussawi et al., 2024) show that NPLs have a negative impact on the profitability of Egyptian private banks. Furthermore, the results of research (Abdou & Alarabi, 2024) the probability value shows a negative and non-significant relationship to profitability. This shows the opposite effect between NPLs and profitability. So, if the NPL is getting bigger, the profitability value will decrease or be small. Vice versa, if NPLs are lower, profitability will increase.

**Inflation**

The results of the study (Mirović et al., 2024) showed an influence between inflation and profitability in a banking institution in Eurozone. The results of the study (Kelmendi, 2024) concluded that inflation has a positive effect on return on assets, explained that healthy bank performance will increase banking credibility by providing confidence for customers and investors, and good financial management will allow banks to survive in crisis conditions. Furthermore, the results of research (Mantik et al., 2024) based on the partial t test found that inflation has a positive effect on banking profitability.

**Interest Rate**

The results of the study (Faheem et al., 2024) show that interest rates have a positive effect on return on assets, the higher the interest rate, the higher the level of company profitability. The results (Yakubu, 2019) of the study concluded that there was an influence between interest rates on bank profitability. The results of the study (Rashid & Jabeen) showed a negative influence between interest rates on return on assets, this found that interest rates are an incalculable or disparaging impact on banks working in the Islamic system but have a good impact on conventional banks.

**Foreign Ownership**

Research results (Vo Thi Thuy Vy & Vo Hoang Diem Trinh, 2016) from their empirical findings show that foreign ownership has a U-shaped relationship with firm

profitability. Specifically, profitability decreases as foreign participation rises to about 25.7% and increases later. This means that foreign ownership may have the opposite impact when it is concentrated. According to research (Faheem et al., 2024) shows that inflation has a negative effect on return on assets, the higher the inflation rate, the lower the profitability of the company.

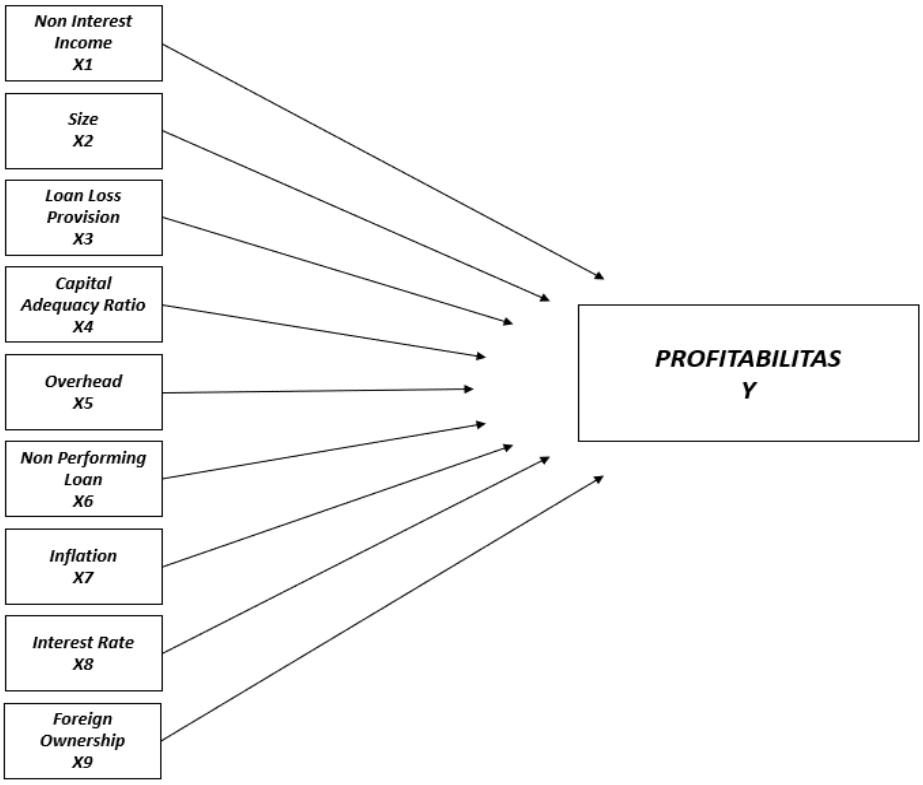


**Figure 1**
**Framework**

## RESEARCH METHOD

This study aims to examine the effect of non-interest income (NII), size, loan loss provision, capital adequacy ratio (CAR), overheads, non-performing loans (NPL), inflation, interest rate, and foreign ownership variables on profitability. The research conducted is quantitative and the data obtained is secondary data. The data source comes from the website of the Indonesia Stock Exchange (IDX), the Central Bureau of Statistics, Bank Indonesia and the website of each company with the object of research for the last seven years, from 2017 to 2023. The data is obtained from companies that publish financial reports and annual reports. The unit of analysis used in this study is commercial banking companies listed on

the IDX. The sample withdrawal technique in this study was based on the purposive sampling method. Thus, this research sample includes 224 financial statement data, consisting of 32 companies for 7 years (2017-2023 period). This is based on considerations that are adjusted to the variables used in this study in order to obtain appropriate results. Panel data regression analysis was used in this study with the Eviews 12 software analysis tool.

**Table 1**
**Operational Definition of Variables**

| Variable Type | Proxy | Symbol | Formula | Reference |
|---|---|---|---|---|
| Dependent Variable | Return on Assets | ROA | $\frac{Profit\ After\ Tax}{Total\ Assets}$ | (Akentara et al., 2024) |
| | Non Interest Income | NII | $\frac{Non\ Interest\ Income}{Total\ Income}$ | (Abu Khalaf et al., 2024d) |
| | Size | Size | Natural Log of Total Assets | (Aboagye-Otchere & Boateng, 2023) |
| | Loan Loss Provision | LLP | $\frac{CKPN\ yang\ dibentuk}{Kredit\ yang\ disalurkan}$ | (Vebriana et al., 2020) |
| Independent Variable | Capital Adequacy Ratio | CAR | $\frac{Tier\ 1\ capital\ + Tier\ 2\ capital}{Risk\ Weighted\ Assets}$ | (Akentara et al., 2024) |
| | Overheads | OIR | The Overheads-to-Income Ratio | (Abu Khalaf et al., 2024d) |
| | Non Performing Loan | NPL | % of total gross loans | (Akentara et al., 2024) |
| | Inflation | Inflation | The Annual Rate of Consumer Prices Increase in a Country (%) | (Lamothe et al., 2024) |
| | Interest Rate | IR | Annual policy rate of the Central Bank in a country (%) | (Lamothe et al., 2024) |
| | Foreign Ownership | FO | The ratio of the number of shares held by foreign investors to total outstanding shares | (Lamothe et al., 2024) |

## RESULTS AND DISCUSSION

The data analysis method used in this study is panel data regression, which aims to measure and test the effect of independent variables, namely non-interest income (NII), size, loan loss provision, capital adequacy ratio (CAR), overheads, non-performing loans (NPL), inflation, interest rate, and foreign ownership. The dependent variable is financial performance as measured by return on assets (ROA). The available data will be measured and tested using Eviews 12 software.

There are three models in testing panel data regression analysis, namely common effect, fixed effect, and random effect models. Three test steps are carried out in determining

the selection of the right model to interpret, namely the Chow Test, Hausman Test, and Lagrange Multiplier Test (Tarmizi, 2023).

**Chow Test**

There are two possible results from the Chow test results, namely common effect and fixed effect. The Chow test is used in this study to determine which model is more effective and acceptable. The Chow test is based on two hypotheses, namely the null hypothesis that there is no individual heterogeneity and the alternative hypothesis that there is cross-sectional heterogeneity.

**Table 2**
**Chow Test**

Redundant Fixed Effects Tests
Equation: Untitled
Test cross-section fixed effects

| Effects Test | Statistic | d.f. | Prob. |
|---|---|---|---|
| Cross-section F | 16.147323 | (31,183) | 0.0000 |
| Cross-section Chi-square | 295.195837 | 31 | 0.0000 |

Source: Processed data using E-views

Based on the Chow Test Table, the results show that the cross-section probability value of the chi-square is 0.0000 <0.05, meaning that the decision obtained is H0 rejected so that the model used is fixed effect.

**Hausman Test**

There are two possible Hausman test results, namely random effect or fixed effect. The Hausman test can be used in this study to determine which model is more accurate and better. In addition, the purpose of the Hausman test is to determine the characteristics of each model whether it has heterogeneity.

**Table 3**
**Hausman Test**

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

| Test Summary | Chi-Sq. Statistic | Chi-Sq. d.f. | Prob. |
|---|---|---|---|
| Cross-section random | 0.000000 | 9 | 1.0000 |

Source: Processed data using E-views

Based on the table of the Hausman test results, the results show that the cross-section probability value of the statistic is 1.0000 > 0.05, therefore the decision obtained is H0 accepted, so the model used is the Random Effect model in the Hausman test.

**Lagrange Multiplier Test**

The Lagrange Multiplier test is a test used to determine the best model in the study, namely between the common effect model or the random effect model.

**Table 4**
**Lagrange Multiplier Test**

Lagrange Multiplier Tests for Random Effects
Null hypotheses: No effects
Alternative hypotheses: Two-sided (Breusch-Pagan) and one-sided (all others) alternatives

| | Test Hypothesis | | |
|---|---|---|---|
| | Cross-section | Time | Both |
| Breusch-Pagan | 233.5653 | 0.260646 | 233.8260 |
| | (0.0000) | (0.6097) | (0.0000) |

Source: Processed data using E-views

Based on the table of the Lagrange multiplier test results, the results show that the probability value of the cross-section one side Breusch Pagan is 0.0000 <0.05, therefore the decision obtained is H0 rejected, so the model used is the Random Effect model in the Lagrange multiplier test.

**Data Analytics**

**Table 5**
**Descriptive Statistics**

Date: 07/20/24 Time: 11:30
Sample: 2017 2023

| | NII | SIZE | LLP | CAR | OIR | NPL | INFLASI | IR | FO | ROA |
|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 5.224604 | 17.59924 | 0.028354 | 0.305467 | 0.512407 | 0.013091 | 0.030186 | 0.048571 | 0.394971 | 0.017330 |
| Median | 4.435500 | 17.52570 | 0.019950 | 0.235250 | 0.463250 | 0.009650 | 0.027200 | 0.050000 | 0.299700 | 0.015900 |
| Maximum | 14.60600 | 21.49990 | 1.150600 | 1.699200 | 2.781800 | 0.045900 | 0.055100 | 0.060000 | 0.990000 | 0.047800 |
| Minimum | 1.002300 | 11.31810 | 0.000500 | 0.107800 | 0.000000 | 0.000000 | 0.016800 | 0.035000 | 0.000000 | 0.000200 |
| Std. Dev. | 3.510579 | 2.014035 | 0.076941 | 0.203997 | 0.340396 | 0.009971 | 0.011941 | 0.009645 | 0.346317 | 0.011598 |
| Skewness | 0.790062 | -0.303649 | 13.94542 | 2.963873 | 2.663486 | 1.037789 | 0.985306 | -0.132504 | 0.539029 | 0.714832 |
| Kurtosis | 2.691872 | 2.948430 | 203.8753 | 14.85740 | 15.65677 | 3.561080 | 3.093881 | 1.435023 | 1.773431 | 2.985003 |
| Jarque-Bera | 24.18951 | 3.467058 | 383868.7 | 1640.203 | 1759.991 | 43.14643 | 36.32653 | 23.51425 | 24.88900 | 19.07888 |
| Probability | 0.000006 | 0.176660 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000008 | 0.000004 | 0.000072 |
| Sum | 1170.311 | 3942.230 | 6.351400 | 68.42470 | 114.7792 | 2.932300 | 6.761600 | 10.88000 | 88.47350 | 3.882000 |
| Sum Sq. Dev. | 2748.288 | 904.5632 | 1.320147 | 9.280126 | 25.83891 | 0.022171 | 0.031797 | 0.020743 | 26.74566 | 0.029996 |
| Observations | 224 | 224 | 224 | 224 | 224 | 224 | 224 | 224 | 224 | 224 |

Based on the results above, it is known that:

1. Return on Asset (ROA), the results of descriptive statistical tests show that the average ROA is 0.017330 with a standard deviation of 0.011598. ROA has a maximum value of 0.047800 owned by Amar bank in 2023, this maximum value indicates that the company can generate large profits from its assets. ROA has a minimum of 0.000200 owned by Amar bank in 2021, this indicates that the bank is experiencing losses.
2. Non-interest income (NII), the results of the descriptive statistical test show that the average NII is 5.224604 with a standard deviation of 3.510579. NII has a maximum value of 14.60600 owned by BNII bank in 2022, NII has a minimum value of 1.002300 owned by Amar bank in 2019.
3. Size has an average value of 17.59924 with a standard deviation of 2.014035. Size has a maximum value of 21.49990 owned by BMRI bank in 2023, size has a minimum value of 11.31810 owned by Mega bank in 2017.
4. Loan loss provision (LLP), the results of descriptive statistical tests show that the average LLP is 0.028354 with a standard deviation of 0.076941. LLP has a maximum value of 1.150600 owned by Amar Bank in 2023, and LLP has a minimum value of 0.000500 owned by Capital Bank in 2021.
5. Capital adequacy ratio (CAR), the results of the descriptive statistical test show that the average CAR is 0.305467 with a standard deviation of 0.203997. CAR has a maximum value of 1.699200 owned by ARTO bank in 2021, CAR has a minimum value of 0.107800 owned by Mayapada bank in 2023.
6. Overhead (OIR), the results of the descriptive statistical test show that the average OIR is 0.512407 with a standard deviation of 0.340396. OIR has a maximum value of 2.781800 owned by Mayapada Bank in 2021, and OIR has a minimum value of 0.000000 owned by MASB bank from 2021 to 2023.
7. Non-performing loan (NPL), the results of the descriptive statistical test show that the average NPL is 0.013091 with a standard deviation of 0.009971. NPL has a maximum value of 0.045900 owned by BJTM bank in 2017, and NPL has a minimum value of 0.000000 owned by Capital Bank from 2020 to 2023.

8. Inflation, the results of descriptive statistical tests show that the average owned by inflation is 0.030186 with a standard deviation of 0.011941. Inflation has a maximum value of 0.055100 in 2022 and a minimum value of 0.016800 in 2020.
9. Interest rate, the results of the descriptive statistical test show that the average interest rate is 0.048571 with a standard deviation of 0.009645. The interest rate has a maximum value of 0.060000 in 2023 and a minimum value of 0.035000 in 2021.
10. Foreign ownership, the results of the descriptive statistical test show that the average owned by foreign ownership is 0.394971 with a standard deviation of 0.346317. Foreign ownership has a maximum value of 0.990000 owned by DNAR bank from 2017 to 2018 and a minimum value of 0.000000 owned by Capital Bank from 2017 to 2019.

**Table 6**
**Individual Test Results (T-test)**

| | ROA | | |
|---|---|---|---|
| | **Coefficient** | **Probability** | **Results** |
| NII | 8.12 | 0.7061 | No Effect |
| SIZE | -0.00042 | 0.2767 | No Effect |
| LLP | 0.02451 | 0.0078 | Affected |
| CAR | 0.007521 | 0.0384 | Affected |
| OIR | -0.01064 | 0.0000 | Affected |
| NPL | -0.32674 | 0.0000 | Affected |
| INFLASI | 0.040766 | 0.5242 | No Effect |
| IR | 0.079413 | 0.3156 | No Effect |
| FO | -0.003950 | 0.0588 | No Effect |

Source: Processed data using E-views

Table 6 shows that the Non-Interest Income variable has a p-value of 0.7061 when compared to the significance value of 0.05, it can be concluded that the p-value is greater than the significance level, so Non-Interest Income does not affect Return On Asset. The NII regression coefficient of 8.12 states that each additional NII of 1 unit will increase ROA by 8.12. Non-Interest Income will not affect the Return on Assets.

Size has a p-value of 0.2767 when compared to the significance value of 0.05, it can be concluded that the p-value is greater than the significance level, so Size has no effect on Return on Assets. The regression coefficient of Size of -0.00042 states that each additional Size of 1 unit will reduce ROA by -0.00042. Size will not affect the Return on Asset.

Loan Loss Provision has a p-value of 0.0078 when compared to the significance value of 0.05, it can be concluded that the p-value is smaller than the significance level, so Loan Loss Provision has a positive effect on Return on Asset. The Loan Loss Provision regression coefficient of 0.0245 states that each addition of LLP by 1 unit of food will increase ROA by 0.0245. Loan Loss Provision will affect Return on Asset.

Capital Adequacy Ratio has a p-value of 0.00384 when compared to the significance value of 0.05, it can be concluded that the p-value is smaller than the significance level, so the Capital Adequacy Ratio has a positive effect on Return on Asset. The Capital Adequacy Ratio regression coefficient of 0.00752 states that each addition of CAR by 1 unit will increase ROA by 0.00752. Capital Adequacy Ratio will affect Return on Asset.

Overhead has a p-value of 0.0000 when compared to the significance value of 0.05, it can be concluded that the p-value is smaller than the significance level, so Overhead has a negative effect on Return on Asset. The Overhead regression coefficient of -0.01064 states that each addition of OIR by 1 unit will reduce ROA by -0.01064. Overhead will affect Return On Asset.

Non-Performing Loan has a p-value of 0.0000 when compared to the significance value of 0.05, it can be concluded that the p-value is smaller than the significance level, so Non-Performing Loan has a negative effect on Return on Asset. The Non-Performing Loan regression coefficient of -0.3267 states that each additional NPL of 1 unit of food will reduce ROA by -03267. Non-Performing Loan will affect Return on Asset.

Inflation has a p-value of 0.5242 when compared to the significance value of 0.05, it can be concluded that the p-value is greater than the significance level, so Inflation has no effect on Return on Asset. The regression coefficient of Inflation of 0.0407 states that every additional INF of 1 unit will increase ROA by 0.0407. Inflation will not affect Return On Asset.

Interest Rate has a p-value of 0.3156 when compared to the significance value of 0.05, it can be concluded that the p-value is greater than the significance level, so the Interest Rate has no effect on Return on Asset. The Interest Rate regression coefficient of 0.0794 states that each addition of IR by 1 unit will increase ROA by 0.0794. Interest Rate will not affect Return on Asset.

Foreign Ownership has a p-value of 0.0588 when compared to the significance value of 0.05, it can be concluded that the p-value is greater than the significance level, so Foreign Ownership has no effect on Return on Asset. The Foreign Ownership regression coefficient of -0.0395 states that each addition of FO by 1 unit will reduce ROA by -0.0395. Foreign Ownership will not affect the Return on Asset.

ROA = 0.27520 + 8.12 NII – 0.0042 SIZE + 0.02451 LLP + 0.007521 CAR - 0.01064 OIR - 0.32674 NPL + 0.040766 INF + 0.079413 IR - 0.003950 FO

**Non-Interest Income to Return on Assets**

Based on statistical tests with return on assets as the dependent variable, it shows that non-interest income has no effect on return on assets. This is contrary to the results of research (Abu Khalaf et al., 2024) which shows that non-interest income has a positive effect on return on assets. However, this study is in line with (Yudha et al., 2017) which found that non-interest income has no effect on return on assets.

This can be caused by the small average owned by non-interest income compared to interest income so that changes in non-interest income have no effect on return on assets. Bank operating income from the non-interest sector is more volatile than interest income. So it can be concluded that statistically non-interest income does not affect the return on assets so H1 is rejected.

**Size to Return on Assets**

Based on statistical tests with return on assets as the dependent variable, it shows that size does not affect Return on Assets. This contradicts the results of research (Abu Khalaf et al., 2024) which shows that size has a negative effect on return on assets. However, this study is in line with (Tharu & Shrestha, 2019) which found that size does not affect Return on Assets.

According to the results of research (Phan et al., 2020) shows that size has no effect on Return on Assets at commercial banks in Vietnam. This is because company size is not the main thing that must be seen in a company, whereas a large company size does not mean that it can get profitability which is also large, and vice versa. So it can be concluded that statistically size does not affect return on assets so H2 is rejected.

**Loan Loss Provision to Return on Asset**

Based on statistical tests with return on assets as the dependent variable, it shows that loan loss provisions influence return on assets. This is in line with research results (Abu Khalaf et al., 2024) which show that loan loss provisions have a negative influence on return on assets. Research results (Weinechita Pelealu & Worang, 2019) show that Loan Loss Provisions affect bank profitability.

Research results (Annor & Obeng, 2019) show that this loan loss provision has a negative effect on banking profitability. This is because the more banks provide provisions for loan losses, the more profits will be reduced or the provisions will gradually be absorbed into the bank's profit margin. So, it can be concluded that statistically loan loss provisions affect return on assets so H3 is accepted.

**Capital Adequacy Ratio to Return on Asset**

Based on statistical tests with return on assets as the dependent variable, it shows that the capital adequacy ratio influences return on assets. This is not in line with research results (Abu Khalaf et al., 2024) which show that the capital adequacy ratio does not influence return on assets. However, the results of this research are in line with those (Takahashi & Vasconcelos, 2024) which show that the capital adequacy ratio has a negative effect on profitability in commercial banks in Brazil, meaning that an increase in the capital adequacy ratio can cause a decrease in profitability and vice versa, a decrease in the value of the capital adequacy ratio will cause profitability value increases.

Furthermore, research results (Mulbah et al., 2024) show that there is a positive influence between the Capital Adequacy Ratio and Return On Assets. This is because the higher the CAR, the better the bank's ability to bear the risk of any risky credit/productive assets. The higher the level of capital adequacy a bank has, the higher the return on assets and vice versa. So it can be concluded that statistically the Capital Adequacy Ratio influences return on assets so that H4 is accepted.

**Overhead to Return on Asset**

Based on statistical tests with return on assets as the dependent variable, it shows that overhead has an influence on return on assets. This is in line with research results (Abu Khalaf et al., 2024) which show that overhead has a negative effect on return on assets in all

models. Then, research results (Serwadda, 2018) show that overhead has a negative effect on return on assets.

This is because the greater the overheads incurred by the bank, the lower profitability will be. When the bank's operational activities require large costs and the bank must maintain stable profits, the bank is obliged to reduce costs in its operational activities so that profits are maintained. Any costs incurred by the bank will reduce the funds owned by the bank, resulting in reduced profits for the bank. So it can be concluded that statistically Overheads influence Return on Assets so that H5 is accepted.

**Non-Performing Loan to Return on Assets**

Based on statistical tests with return on assets as the dependent variable, it shows that non-performing loans influence return on assets. This is in line with research results (Mirović et al., 2024) showing that there is a negative influence on banking institutions between non-performing loans (NPL) and return on assets (ROA), this shows that the higher the non-performing loan ratio, the lower the profitability. Research results (El Moussawi et al., 2024) show that non-performing loans have a negative influence on the profitability of Egyptian private banks. Research results (Islam & Shohel Rana, 2019) show that non-performing loans have a negative influence on the profitability of commercial banks in Bangladesh.

This is because non-performing loans are a form of financing where the higher the NPL, the lower the return on credit provided by the bank. An increase in Non-Performing Loans (NPL) will make the quality of bank credit worse, causing the number of non-performing loans to increase and therefore the bank will have to bear losses in its operational activities, thereby affecting the decline in profit (ROA) obtained by the bank. Low non-performing loans (NPL) indicate bank performance is getting better. So it can be concluded that statistically non-performing loans affect return on assets so that H6 is accepted.

**Inflation to Return on Assets**

Based on statistical tests with return on assets as the dependent variable, it shows that inflation does not influence on return on assets. This is contrary to research results (Faheem et al., 2024) showing that inflation has a negative influence on Return On Assets, the higher the inflation rate, the lower the company's profitability level. However, the results of this

research are in line with (Ovamba Kiganda, 2014) who found that inflation has no effect on return on assets.

Furthermore, research results (Javaid, 2016) show that inflation does not influence on return on assets. This can be caused by internal factors which are basically influenced by internal decisions of management and the board to determine bank performance. So it can be concluded that statistically inflation does not affect the return on assets so H7 is rejected.

**Interest Rate to Return on Assets**

Based on statistical tests with return on assets as the dependent variable, it shows that the interest rate does not influence on return on assets. This is contrary to research results (Faheem et al., 2024) showing that the interest rate has a positive effect on return on assets, the higher the interest rate, the higher the company's profitability level. However, the results of this research are in line with (Javaid, 2016) which shows that the interest rate does not affect return on assets.

Research results (Islam & Shohel Rana, 2019) show that the interest rate does not affect the return on assets. This is because high interest rates, both loan interest rates and deposit or savings interest rates, result in a fixed margin spread from the difference between the two interest rates. So it can be concluded that statistically, the interest rate does not affect the return on assets so H8 is rejected.

**Foreign Ownership to Return on Asset**

Based on statistical tests with return on assets as the dependent variable, it shows that foreign ownership does not influence return on assets. This contradicts research results (Faheem et al., 2024) concluding that foreign ownership (FO) has a significant and positive effect on return on assets. However, the results of this research are in line with (Jiraporn et al., 2019) which shows that foreign ownership does not influence the return on assets of banks in ASEAN.

This is because foreign ownership only owns a small portion of banking shares compared to large shareholders or controlling shareholders. This minority ownership cannot provide significant influence on decision-making or control of the bank. So it can be concluded that statistically foreign ownership does not affect return on assets so H9 is rejected.

## CONCLUSION

Based on the results of the research, it can be concluded that the variables of non-interest income, size, inflation, interest rate, and foreign ownership do not significantly affect profitability. Conversely, variables such as loan loss provision, capital adequacy ratio, overhead, and non-performing loans have a significant impact on profitability. This study indicates that factors such as the management of problematic loans, capital adequacy ratio, and operational efficiency are key determinants of profitability. The study also acknowledges certain limitations, including the need for company managers to consider other factors like financing decisions, asset utilization, tangibility, sales growth, and age, which can maximize profitability. For future research, it is recommended to explore different sectors and extend the study period to identify additional factors that may affect corporate profitability more comprehensively. Thus, this research provides valuable insights for company managers in making strategic decisions to enhance the financial performance of their companies.

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