



Internal and External Factors Affecting Profitability in Private Banking for the Period 2019-2023

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ABSTRACT

This research investigates how both internal and external elements impact the financial success of private banks that are publicly traded on the Indonesia Stock Exchange from 2019 to 2023. Factors within the banks such as Capital Adequacy Ratio (CAR) and Non-Performing Loans (NPL) will be analysed, along with external factors like inflation and the benchmark interest rate (BI Rate). Return on Assets (ROA) is a key indicator of banks' efficiency in terms of using their assets to make a profit. In this study, panel data regression analysis was used to analyse data from official financial reports. The results show that Capital Adequacy Ratio (CAR) has a positive impact on ROA, while Non-Performing Loans (NPL) have a negative impact. Interestingly, factors like inflation and the Bank Indonesia (BI) Rate do not seem to have a significant effect on ROA. This research distinguishes itself by focusing on how these variables interact within the unique environment of private banking in Indonesia. The study proposes various strategies to improve profitability, including better management of credit risks and capital adequacy.

Keywords: Return on Assets (ROA), Capital Adequacy Ratio (CAR), Non-Performing Loans (NPL), Inflation, BI Rate

1. INTRODUCTION

The banking industry has a crucial function in aiding economic development and ensuring financial security through facilitating the transfer of funds from those with extra to those in need. Profitability is a key factor in determining banking success, typically assessed through Return on Assets (ROA) (Agabekova et al., 2023). This ratio assesses how well a bank is converting its assets into profits, serving as an indicator of its financial well-being.

Various factors, both internal and external, have an impact on the profitability of banks. Internally, factors like the Capital Adequacy Ratio (CAR) and Non-Performing Loans (NPL) play a crucial role. The CAR is a measure of a bank's ability to handle potential losses from credit and operational risks, with a higher CAR indicating stronger capital resilience and boosting investor and depositor trust. Conversely, the NPL signifies the proportion of underperforming loans in a bank's portfolio, with a higher NPL indicating heightened credit risk and potentially reducing the bank's net profit due to increased provisioning expenses. Externally, elements like inflation and the benchmark interest rate (BI Rate) also have an impact on bank profitability. Inflation, which is a widespread rise in the prices of goods and services, can escalate a bank's operational expenses and weaken consumer purchasing power. On the other hand, the BI Rate, which is determined by Bank Indonesia, affects the funding costs and interest income of banks. Fluctuations in the BI Rate can directly influence net interest margins and consequently, bank profitability (Saleh & Winarso, 2021).

However, there is a gap in understanding the combined influence of these variables on bank profitability, particularly in the private banking sector in Indonesia during the period 2019–2023. Previous studies have tended to focus on one group of variables, either internal or external, without considering their simultaneous impact. To address this need, this study integrates CAR, NPL, inflation, and BI Rate analyses into a unified framework to provide a more holistic understanding (Nadzifah & Sriyana, 2020). The increase in economic

uncertainty in recent years has reinforced the importance of understanding these factors in depth. The period 2019–2023, for example, has been marked by global and domestic dynamics that have affected Indonesia's economic stability, such as the impact of the COVID-19 pandemic and fluctuations in monetary policy (Nurul et al., 2021). Therefore, this study provides a more comprehensive analysis of the variables that affect bank profitability, both from internal and external aspects.

The primary goal of this research is to investigate how internal factors (CAR and NPL) and external factors (inflation and BI Rate) impact the Return on Assets (ROA) of private banks that are publicly traded on the Indonesia Stock Exchange (IDX) between 2019 and 2023. Through addressing the current research void, it is anticipated that this study will make valuable contributions to academia and also suggest useful recommendations for banking oversight and policy development.

2. RESEARCH METHODS

This research concentrates on the economic statements of domestic private banks that are publicly traded on the Indonesia Stock Exchange (IDX) from 2019 to 2023. The population in this study includes all private banks that meet certain criteria, including those that report financial data publicly through the IDX.

In this research, participants were chosen using purposive sampling, a method that selects individuals based on certain criteria related to the research goals (Sa'adah, 2021). The criteria used to select the sample included: private banking companies listed on the IDX during the observation period; private banking companies that published their annual reports on time during the observation period; and private banks that fell into the KBMI 3 category. This sampling technique resulted in a total of seven private banking companies.

This research utilises data from financial reports found on the official website of the Indonesia Stock Exchange at www.idx.co.id. The data consists of details related to various factors like ROA, CAR, NPL, inflation, and interest rates.

The analysis of the data was carried out through panel data regression in order to determine the impact of independent variables on dependent variables. The model for regression can be written as:

$$Y_{it} = \alpha + \beta_1 + X_{1it} + \beta_2 + X_{2it} + \beta_3 + X_{3it} + e$$

3. RESULTS AND DISCUSSION

3.1. Research Results

3.1.1. ROA Calculation Results

Table 1. ROA calculation results for Indonesian private banks

No.	Company Code	Year					Mean	Category
		2019	2020	2021	2022	2023		
1	BBCA	3,10	2,52	2,55	3,09	3,45	2,94	Very healthy
2	PNBN	2,30	1,86	1,22	1,92	1,70	1,77	Very healthy
3	BDMN	2,83	1,02	1,18	2,22	2,12	1,88	Very healthy
4	BNGA	1,93	1,04	1,71	2,14	2,49	1,86	Very healthy
5	BNLI	1,24	0,81	0,66	1,02	1,30	1,01	Fairly healthy
6	BTPN	2,21	1,43	2,08	2,22	1,71	1,93	Very healthy
7	NISP	2,15	1,34	1,49	1,76	2,07	1,76	Very healthy

Source: Processed secondary data, 2024

The table above shows the Return on Assets (ROA) performance of seven private banks listed in Indonesia for the period 2019-2023, with annual average performance summarised in financial health categories. ROA reflects a bank's effectiveness in generating profits based on its assets. Most banks in this table, such as BBCA, PNBN, and BTPN, are in the 'Very Healthy' category with an average ROA above 1.5%, indicating strong asset management capabilities. The bank with the highest ROA during this period is BBCA, which has consistently shown an increase from 2.52 in 2020 to 3.45 in 2023, with an overall average of 2.94%.

Conversely, BNLI is listed in the 'Fairly Healthy' category with an average ROA of 1.01%, indicating potential for improvement in asset management efficiency.

3.1.2. CAR Calculation Results

Table 2. CAR Calculation Results for Indonesian Private Banks

No.	Company Code	Year					Mean	Category
		2019	2020	2021	2022	2023		
1	BBCA	14,75	12,96	16,62	28,29	24,44	19,41	Very healthy
2	PNBN	8,29	13,06	11,49	12,42	9,28	10,91	Less healthy
3	BDMN	11,57	14,75	17,86	18,78	21,15	16,82	Very healthy
4	BNGA		8,34	7,37	11,37	13,03	20,07	Fairly healthy
5	BNLI		18,44	9,28	12,04	8,59	13,84	Fairly healthy
6	BTPN	24,51	8,70	21,97	9,06	16,42	16,13	Very healthy
7	NISP	23,79	11,95	10,31	14,37	14,79	15,04	Very healthy

Source: Processed secondary data, 2024

The table above shows the average Capital Adequacy Ratio (CAR) of seven private banks in Indonesia during the period 2019 to 2023. CAR is an important indicator used to measure a bank's ability to bear financial risks and meet its obligations with its capital. The results show that most banks, such as BBCA, BDMN, and BTPN, are in the 'Very Healthy' category with average CARs of 19.41%, 16.82%, and 16.13%, respectively. BBCA recorded a significant increase from 12.96% in 2020 to 28.29% in 2022, reflecting a consistent strengthening of its capital structure. Conversely, PNBN is in the 'Less Healthy' category, with an average CAR of 10.91%, indicating the need for improvements in capital management to meet more optimal banking standards.

3.1.3. NPL Calculation Results

Table 3. NPL Calculation Results for Indonesian Private Banks

No.	Company Code	Year					Mean	Category
		2019	2020	2021	2022	2023		
1	BBCA	1,25	1,29	0,92	0,95	0,86	1,05	Very healthy
2	PNBN	2,53	2,40	3,23	2,05	2,84	2,61	Healthy
3	BDMN	3,22	2,70	1,85	2,36	1,36	2,30	Healthy
4	BNGA	1,26	1,65	1,29	1,74	2,12	1,61	Very healthy
5	BNLI	4,75	3,91	3,88	4,28	3,48	4,06	Healthy
6	BTPN	1,65	2,27	2,88	1,47	1,56	1,96	Very healthy
7	NISP	2,61	3,25	2,10	2,72	3,10	2,76	Healthy

Source: Secondary data processed, 2024

The table above presents the average Non-Performing Loan (NPL) data from seven private banks in Indonesia during the period 2019 to 2023. NPL is an important indicator for assessing the quality of a bank's credit, with a lower ratio reflecting better credit risk management. The results show that banks such as BBCA, BNGA, and BTPN fall into the 'Very Healthy' category, with average NPLs of 1.05%, 1.61%, and 1.96%, respectively. This reflects the effectiveness of these banks in maintaining the quality of their credit portfolios. Meanwhile, banks such as BNLI have the highest average NPL of 4.06% and are classified as 'Healthy,' indicating higher credit risk compared to other banks. Overall, this table illustrates the variation in credit health levels in the private banking sector, where most banks have managed to maintain their NPL ratios at acceptable levels according to industry standards.

3.1.4. Inflation Calculation Results

Table 4. Inflation calculation results

No.	Years	IHK	Inflation (%)
1	2019	102.72	2.72%
2	2020	104.40	1.68%
3	2021	106.35	1.87%
4	2022	112.20	5.51%
5	2023	116.78	4.08%

Source: Indonesian Central Statistics Agency, 2024

The 2019 CPI showed stable inflation at around 2.72% annually, reflecting fairly controlled inflation during that year. In 2020, the CPI experienced a decline in inflation due to the COVID-19 pandemic, with the annual inflation rate at around 1.68%. In 2021, inflation began to rise again to around 1.87%, although it was still lower than Bank Indonesia's target. In 2022, inflation increased significantly to 5.51%, mainly driven by rising energy and food prices. Furthermore, in 2023, inflation will stabilise again, although it will remain above average, with the latest data showing an inflation trend controlled by Bank Indonesia's tight monetary policy.

Excessive inflation has the potential to decrease the buying capacity of individuals, as the cost of goods and services increases at a quicker rate compared to incomes. This can lead to economic instability, a decline in investments, and pressure on the central bank to increase interest rates, potentially hampering economic expansion. Additionally, high inflation harms savers as the real value of savings decreases, while borrowers may benefit if their debts are repaid with money of lower value. Conversely, inflation that is too low or deflation also has negative effects. Demand for goods and services may decline, slowing economic growth. Consumers may delay purchases, hoping that prices will fall further, leading to a decline in consumption and investment. In addition, deflation increases the real burden of debt and may force companies to reduce wages or lay off employees, worsening economic conditions.

3.1.5. BI Rate Calculation Results

Table 5. BI Rate calculation results

No.	Year	BI Rate Interest
1.	2019	5%
2.	2020	3,75%
3.	2021	3,5%
4.	2022	5,5%
5.	2023	6%

Source: Bank Indonesia, 2024

The table above shows changes in the BI Rate from 2019 to 2023. In 2019, the BI rate stood at 5%, reflecting a relatively stable monetary policy. However, in 2020, as the COVID-19 pandemic impacted the global economy, Bank Indonesia lowered the interest rate to 3.75% to stimulate economic growth by making loans cheaper.

The interest rate continued to decline in 2021, with the BI Rate falling slightly to 3.5%, the lowest interest rate during that period. Starting in 2022, BI raised interest rates to 5.5% in response to rising global inflationary pressures, particularly due to rising energy prices. This upward trend continued into 2023, with BI rates reaching 6%, as part of a tight monetary policy to control inflation and maintain economic stability.

3.1.6. Panel Data Regression Equation

This study took a sample of seven private banks in Indonesia, namely Bank Central Asia (BBCA), Bank Panin (PNBN), Bank Danamon (BDMN), Bank CIMB Niaga (BNGA), Bank Permata (BNLI), Bank Tabungan Pensiunan Nasional (BTPN), and Bank OCBC NISP (NISP). The panel data regression equation can be formulated as follows:

$$Y = 1.0702 + 0.0341X_1 - 0.3575X_2 - 0.0005X_3 + 28.1034X_4$$

3.1.7. Statistical t-test results

Table 6. Statistical t-test results

Dependent Variable: Y
 Method: Panel Least Squares
 Date: 11/22/24 Time: 19:22
 Sample: 2019-2023
 Periods included: 5
 Cross-sections included: 7
 Total panel (balanced) observations: 35

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.070279	0.523775	2.043394	0.0499
X1	0.034168	0.015352	2.225626	0.0337
X2	-0.357578	0.080057	-4.466522	0.0001
X3	-0.000584	0.000972	-0.600651	0.5526
X4	28.10349	14.65857	1.917206	0.0648

a. The Effect of CAR on ROA of Private Banks

The t-test outcome for X1 shows a t-statistic value of 2.2256 and a probability value of $0.0337 < 0.05$. As a result, one can infer that the CAR variable significantly impacts the ROA variable.

b. The Effect of NPL on ROA of Private Banks

The t-test finding for X2 shows a t-statistic of -4.4665 and a probability value of 0.0001 which is less than 0.05. This suggests that the NPL variable has a noteworthy negative impact on the ROA variable.

c. The Effect of Inflation on the ROA of Private Banks

The t-test findings for variable X3 indicate a t-statistic of -0.6006 and a probability value of 0.5526, which is greater than 0.05. As a result, it can be inferred that the presence of inflation does not significantly impact the Return on Assets.

d. The Effect of BI Rate on the ROA of Private Banks

The results of the t-test for X4 show a t-statistic value of 1.9172 with a probability value of 0.0648, which is greater than 0.05. This suggests that the BI Rate variable does not have a notable impact on the ROA variable.

3.1.8. Statistical Test Results for F and R2

Table 7. Statistical Test Results for F and R2

R-squared	0.978594	Mean dependent var	1.884870
Adjusted R-squared	0.856738	S.D. dependent var	0.675011
S.E. of regression	0.451021	Akaike info criterion	1.376958
Sum squared resid	6.102599	Schwarz criterion	1.599151
Log likelihood	-19.096760	Hannan-Quinn criter.	1.453659
F-statistic	11.539150	Durbin-Watson stat	1.383771
Prob(F-statistic)	0.000000		

3.1.9. CAR, NPL, Inflation, and BI Rate Affect the ROA of Private Banks

According to the outcomes of the F-test from the panel data regression analysis for evaluating the F probability, the resulting value was 0.000000, demonstrating significance at a level lower than 0.05. This implies that the CAR, NPL, Inflation, and BI Rate independent variables collectively have a notable impact on ROA. With an adjusted R-squared value of 0.8567, it can be inferred that 85.67% of the dependent variable is affected simultaneously by the independent variables, while the remaining 14.33% is influenced by external factors not considered in this study.

3.2. Discussions

3.2.1. The Effect of CAR on the ROA of Private Banks

The study's results indicate a strong link between the Capital Adequacy Ratio (CAR) and Return On Assets (ROA). Essentially, if a bank's CAR goes up, so does its profitability as measured by ROA. This suggests that banks with a higher CAR are more capable of funding their activities and making money. Similarly, this research aligns with the conclusions drawn in a previous study conducted by Kosasih et al. (2021). It was also determined in the research that there exists a favourable correlation between CAR and ROA. This suggests that the results of the present study align with prior research, enhancing our comprehension of the significance of robust capital in bolstering a bank's financial health.

A high CAR is a good indicator of a bank's financial health. With adequate capital, a bank can more confidently extend credit, expand its business, and manage risks that may arise. Therefore, it is important for regulators and bank management to maintain a capital adequacy ratio at a safe level. However, it should be noted that an excessively high CAR is not always efficient, as it can hamper business growth. Ideally, banks need to balance the need for capital with efforts to increase profitability.

3.2.2. The Effect of NPL on the ROA of Private Banks

The study's findings suggest a correlation between Non-Performing Loans (NPL) and Return on Assets (ROA), showing that a higher level of non-performing loans in a bank leads to lower profit levels. This highlights a negative impact that non-performing loans have on a bank's profitability. These results align with those of a previous research study by Rusnaini et al. (2019). Previous studies have also shown that NPLs have a negative impact on ROA. The consistency of these findings reinforces the hypothesis that non-performing loans are not a factor that can increase bank profitability growth.

Although theoretically it is possible that NPLs could have a positive impact on ROA under very specific conditions, in general the relationship between NPLs and ROA is negative (Ramadani, 2021). An increase in NPLs usually indicates problems in the bank's credit risk management and will have a negative impact on long-term profitability (Saleh & Winarso, 2021). Therefore, banks must always strive to maintain the quality of their assets and minimise their NPL levels.

3.2.3. The Effect of Inflation on the ROA of Private Banks

According to the study findings, there is no notable correlation between the inflation rate and the return on assets (ROA) of national private banks. This suggests that inflation does not necessarily lead to a decrease in bank profitability. It shows that private banks in Indonesia can still remain profitable even amidst inflation. Furthermore, inflation does not seem to have a significant effect on the reduction of customer deposits and savings in private banks.

The results of this research align with a previous study conducted by (Nasikin et al., 2021). Previous studies have also shown that inflation has no significant effect on ROA in private banks. The consistency of these findings reinforces the hypothesis that private banks in Indonesia have developed effective strategies to cope with inflation fluctuations and maintain their financial performance.

The results of this study have several important implications. First, private banks in Indonesia have shown sufficient resilience to inflationary pressures. This may be due to several factors, such as diversification of income sources, efficient cost management, and the ability to adjust deposit and lending rates in line with changes in inflation rates. Second, these findings also indicate that private bank customers have a fairly high level of confidence in the stability of the banking system in Indonesia. However, it should be noted that this condition may change in line with changes in macroeconomic conditions and monetary policy. Further research is needed to analyse other factors that may influence the relationship between inflation and the performance of private banks in the future.

3.2.4. The Effect of the BI Rate on the ROA of Private Banks

The study's findings indicate that there is no noteworthy correlation between the benchmark interest rate (BI Rate) and banks' return on assets (ROA). This suggests that fluctuations in the benchmark interest rate do not greatly affect the profitability of banks. It implies that other factors, rather than the benchmark interest rate, play a more significant role in determining the financial performance of banks.

The findings of this study are in line with the results of a study conducted by (Pratiwi et al., 2022). Previous studies have also shown that the BI Rate has no significant effect on ROA. The consistency of these findings reinforces the hypothesis that internal bank factors, such as management quality, asset structure, and business strategy, play a more important role in determining profitability.

The findings of this study have several important implications. First, banks need to focus more on internal efforts to improve operational efficiency and asset quality, rather than relying solely on changes in the benchmark interest rate. Second, these findings also indicate that monetary policies implemented by the central bank do not always have a direct and significant impact on the performance of the banking sector. However, it should be noted that the relationship between the BI Rate and ROA may vary depending on macroeconomic conditions and the specific characteristics of each bank. Further research is needed to analyse other factors that may moderate the relationship between these two variables.

3.2.5. The Influence of Internal and External Factors on the ROA of Private Banks

The outcomes of the F-test suggest that the regression model employed in this investigation holds a remarkably significant level of importance overall (Probability(F-statistic) value = 0.000000). This suggests that the assorted independent variables encompassed in the model collectively play a substantial role in elucidating the fluctuation in the dependent variable. In simpler terms, this regression model can be utilised to forecast the worth of the dependent variable with a reasonably high degree of precision.

The adjusted R-squared value of 0.8567 suggests that around 85.67% of the variability in the dependent variable can be understood using the independent variables in the model. This suggests that the regression model is effective in capturing the majority of the connections between the variables under study. The 14.33% that is not accounted for is probably due to other variables not considered in the model or due to errors in measurement.

These strong statistical test results support the validity of the regression model used in the study. This model can be considered a useful tool for analysing the relationship between the variables studied. However, it should be remembered that statistical models are only a representation of reality. Therefore, the results of this study need to be interpreted carefully and in the context of the broader research. In addition, further research can be conducted to identify other variables that may improve the predictive power of the model.

4. CONCLUSIONS

The main objective of this research is to analyse the various internal and external factors that impact the profitability of private banking institutions that are publicly traded on the Indonesia Stock Exchange spanning from 2019 to 2023. The results of the study reveal that the Capital Adequacy Ratio (CAR) has a considerable and positive influence on the Return on Assets (ROA), whereas Non-Performing Loans (NPL) have a notable and detrimental effect on ROA. Conversely, inflation and the BI rate do not individually affect ROA in a significant manner. Nevertheless, when examined concurrently, the Capital Adequacy Ratio, Non-Performing Loans, inflation, and the BI rate collectively play a substantial role in impacting the Return on Assets of private banks during the time frame being investigated.

Based on these findings, it is recommended that bank management focuses on maintaining an adequate capital buffer and improving the quality of credit to reduce the level of NPLs. Banks should also enhance risk management strategies to sustain profitability, especially under uncertain macroeconomic conditions. Furthermore, regulators and policymakers may consider creating a more stable economic environment that supports banks' performance and ensures the long-term sustainability of the banking sector.

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