

Profitability in State-Owned Enterprises Banks Listed on the Indonesian Stock Exchange 2019-2023 as an Effect of CAR, TATO, and NPL

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Abstract

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The world of banking plays a crucial role in society and the government. Banks serve as a vital indicator of a country's progress, making them the lifeblood of its economy. As domestic banking becomes more advanced, the competition between banks is intensifying. Just as a financial analyst would recommend, every bank must strive to secure funds and leverage their resources, management, and technology to achieve optimal efficiency and effectiveness in combating competition. This research seeks to analyze the impact of CAR, total asset turn over (TATO), and NPL on profitability (ROA) in state-owned banks listed on the Indonesia Stock Exchange from 2019 to 2023. The data analysis technique in this research utilizes path analysis. Through data collection, a total of 4 state-owned banks were included in this research. These banks have published financial reports for a span of 5 years, resulting in a dataset of 20 data points. The data collected was analyzed using a tool commonly employed by financial analysts to conduct panel data linear regression analysis. According to the research findings, it is evident that CAR has a noteworthy positive impact on Profitability (ROA). Additionally, TATO also has a positive and significant influence on Profitability (ROA). On the other hand, NPL exhibits a negative and significant effect on Profitability (ROA).

I. INTRODUCTION

The banking sector in Indonesia is undergoing rapid advancement and is gaining growing significance for both society and the government. Given its prominent role in the country's economy, banking can be likened to the lifeblood, serving as an indication of the nation's success. With the progress of domestic banking, the competition among banks is becoming more intense. This necessitates every financial institution to make the most of their efforts in acquiring funds, efficiently utilizing money, enhancing management, and leveraging the latest technology [1]. The primary objective of banks is to attain efficiency and effectiveness in confronting competition. Enhancing the quality, quantity, and productivity of banking services can lead to an increase in bank revenues and the optimization of operational profitability [2]. The operational profit serves as a crucial element in bolstering bank capital, fortifying the financial framework, and fostering long-term growth. Amidst this highly competitive landscape, banks that possess the capability to adjust to evolving circumstances and effectively execute appropriate strategies will emerge as leaders. The keys to gaining client loyalty and achieving a competitive edge lie in product and service innovation, the advancement of digital services, and the enhancement of human resources quality. [3] Sophisticated and healthy banking not only generates profits for shareholders but also plays a significant role in fostering national economic progress. Robust financial institutions offer a reliable and consistent means of financing for the private industry, foster investment, and bolster the generation of employment opportunities. Hence, it is imperative to continue nurturing and upholding the advancement of banking in order to attain a more promising economic future.

The national banking industry is anticipated to encounter more formidable obstacles in the next year in contrast to the preceding year, mostly attributable to the persistently volatile global and local economic circumstances [4]. The presence of geopolitical tensions between Russia and Ukraine, along with the ambiguity surrounding the relations between China and Taiwan, has introduced intricacy to the global economic landscape. Consequently, numerous prominent and international corporations are adopting a cautious approach, observing the situation before actively seeking potential ventures in untapped markets. However, within the country, the banking industry is striving to attain a 9-11% rise in banking credit in 2022, despite the challenges posed by rising benchmark interest rates and escalating inflation. Information collected in 2022 reveals periodic variations in the Return on Assets (ROA) of state-owned banks. The average return on assets (ROA) of state-owned banks was 3.39% in 2012, grew to 3.46% in 2013,

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but thereafter declined until 2016. Subsequently, the return on assets (ROA) experienced a subsequent increase in 2017 and 2018, reaching 2.72% and 2.74% respectively. However, it subsequently declined in 2019 and 2020, dropping to 2.27% and 1.21% respectively. Nevertheless, it is projected that the average Return on Assets (ROA) of state-owned banks will rise to 1.87% in 2021, according to a report from [5]. An decrease in the Return on Assets (ROA) percentage is seen as a sign of poor bank performance, suggesting that the bank has not effectively utilized its assets to generate maximum profits [6]. Hence, variations in the return on assets (ROA) performance of government-owned banks indicate the difficulties encountered by the domestic banking industry and necessitate the implementation of suitable policies to confront ever-changing economic circumstances.

The Capital Adequacy Ratio, also known as the CAR, is an important indicator that is applied within the banking industry to evaluate the responsiveness and stability of a financial institution. According to [3], the Capital Adequacy Ratio (CAR) is a measure that is comparable to a shield in that it determines whether or not a bank has sufficient capital to resist risks, particularly those that are caused by the credit that is issued. If the CAR is higher, it indicates that the bank has a more solid capital shield, which enables it to withstand the possibility of losses and maintain business continuity more effectively. [7] The CAR is calculated by way of a comparison between the capital of the bank and high-risk assets, which includes credit. Values of optimal CAR vary depending on the characteristics of the bank and the needs of the regulatory body. Customers and investors alike are more likely to have faith in financial institutions that have high CARs because they demonstrate that they are able to withstand losses and maintain financial stability. Ongoing scientific discourse is being conducted with regard to the association between CAR and bank profitability, as measured by Return on Assets (ROA). In a number of investigations, like the one conducted by [8], it has been demonstrated that CAR and ROA have a good correlation. A consequence of this is that financial institutions that have high CARs are able to finance productive assets at lower costs, which results in increased profits and an increase in the return on assets (ROA) value.

On the other hand, [9] There is an inverse link between revenue and return on assets. It is possible that endeavors that generate profits will be utilized less effectively if they require a high amount of capital. It's possible that this will lead to a decrease in ROA. As a result of the heterogeneity that was discovered in these research findings, it appears that the link between CAR and ROA is complex. This is because it is susceptible to the influence of a wide variety of factors, such as bank strategy, economic conditions, and regulations. It is necessary to do additional research in order to acquire a more full grasp of the complexities attached to this relationship. All things considered, CAR makes a considerable contribution to the robustness of financial institutions and the generating of profits. [10] Financial institutions that have a significant amount of capital adequacy ratio (CAR) are able to withstand risks, hence enhancing the confidence of investors and consumers and maybe increasing their profitability. However, in order to maximize the value of a bank and ensure its continued existence, it is essential to give careful consideration to the optimization of capital in order to achieve a high return on assets.

In addition to the Capital Adequacy Ratio (CAR), Non-Performing Loans (NPL) serves as a significant financial ratio that indicates the extent of credit risk in a bank. Non-performing loans (NPL) refer to a situation where customers are unable to fulfill their financial obligations to the bank [11]. Continual growth in non-performing loans can have severe repercussions for banks, including a reduction in bank capital. Having a high NPL value can be indicative of a lower credit quality, which in turn can have a negative impact on bank losses [12]. On the other hand, a low NPL indicates a lower credit risk for the bank. The relationship between non-performing loans (NPL) and bank profitability, as measured by Return on Assets (ROA), continues to be a topic of discussion among scholars. In their research conducted in 2022, [13] There is a positive correlation between NPL and ROA. When the bank distributes credit, it ensures that the quality is top-notch, resulting in increased profits. When it comes to this situation, a high NPL can actually serve as a sign that the bank has extended credit to borrowers who have the capability to pay it back, thus reducing the credit risk faced by the bank. As a result, the bank's profitability improves as it effectively manages credit risk and generates profit from the credit it disburses. Therefore, these findings demonstrate that non-performing loans (NPLs) can be viewed in a positive light, as they can contribute to a bank's efforts to optimize its credit portfolio and enhance its overall financial performance.

[14] There is a negative association between NPL and ROA, which is contrary to what was anticipated. There is a correlation between high levels of non-performing loans (NPLs) and financial losses, as well as a decrease in the profitability of banks. As a consequence of borrowers falling behind on their payments, interest income might be lost, which can lead to a decline in overall profitability. This can result in a high number of non-performing loans, also known as NPLs. The complex nature of the relationship between NPL and ROA is brought into focus by the fact that the outcomes of this study are not consistent with one another. This relationship is influenced by a wide range of factors, such as the efficiency with which credit is distributed, the state of the economy, and the strategies employed by lending institutions. In order to acquire a more in-depth comprehension of the dynamics of this interaction, it is required to conduct additional research. [15] Non-performing loans (NPL) are an essential indicator that accurately depicts the credit quality and overall health of a financial institution. A careful management of non-performing loans is essential for financial institutions. This can be accomplished by the implementation of selective credit distribution, the maintenance of stringent credit supervision, and the implementation of effective collection mechanisms. By handling non-performing loans in an efficient manner, financial institutions can reduce the risk of incurring losses, improve their overall financial performance, and continue to earn the confidence of both investors and consumers. It is of the utmost importance to keep in mind the connection that exists between NPL and CAR. Because of their

ability to absorb losses from nonperforming loans (NPLs), banks that have high CARs are able to retain both financial stability and profitability. [16] It is essential for financial institutions to successfully maintain these two ratios in order to achieve long-term resilience and to generate growth that is sustainable.

TATO, which stands for total asset turnover, is an important indicator in the banking industry that evaluates how effectively a bank takes advantage of its entire assets in order to create money. When it comes to determining whether or not a bank is profitable, the TATO, which stands for the measure of how well a bank uses its assets to generate income, is an essential component to consider. [17] The association between TATO and profitability provides a valuable understanding of the operational efficiency of a bank as well as its capability to generate profits from its assets. The relationship between TATO (Total Assets Turnover) and profitability in the banking industry has been the subject of investigation in academic study. [18] The fact that TATO has a significant influence on the profitability of financial institutions. When the Total Asset Turnover (TATO) increases, it is an indication that the bank is making better use of its assets in order to generate revenue. Because of this, the bank may be able to strategically employ its assets in order to earn better income, which may result in increased profitability for the bank.

[19] TATO can have a significant impact on the profitability of banks in a variety of different ways. [20] Total Assets Turnover (TATO) might potentially result in a reduction in operational costs in comparison to revenue, which would therefore contribute to increased profit margins for banks. Through the optimization of asset use, financial institutions can improve their operational scale and achieve more efficiency, which ultimately results in enhanced profitability. [21] An increase in TATO (Total Assets Turnover) might improve the liquidity of banks. Because of this, financial institutions are able to capitalize on profitable investment opportunities, which ultimately leads to an increase in their total profitability. Nevertheless, it is of the utmost importance to keep in mind that the relationship between TATO and profitability is not necessarily linear or positive in every single instance. There are a number of factors that could potentially have an impact on this relationship. Some of these aspects include market structure, economic conditions, and business practices of banks. It is possible that an increase in Total Asset Turnover (TATO) will not result in a significant improvement in profitability in the event that a bank has a rapid development of its assets without a matching increase in earnings. Because of the increased operating expenses that are linked with the rapid expansion, it is possible that the profitability of the business could drop as a result.

The research gap in this study pertains to the little understanding regarding the correlation between CAR (Capital Adequacy Ratio), TATO (Total Assets Turnover), NPL (Non-Performing Loans), and profitability in state-owned banks in Indonesia. Despite the existence of several prior studies investigating the correlation between these factors, additional research is required to comprehensively comprehend the intricacies of this relationship within a more defined framework, specifically focusing on state-owned banks in Indonesia throughout a given time frame. Furthermore, this issue stems from a limited understanding of the long-term effects of these variables, namely throughout the period of 2019-2023. Existing research has primarily examined shorter or alternative time frames, resulting in a limited understanding of the correlation between CAR (Capital Adequacy Ratio), firm value, NPL (Non-Performing Loans), and profitability in state-owned banks in Indonesia over an extended duration. This research aims to examine the impact of Capital Adequacy Ratio (CAR), Total Assets Turnover (TATO), Non-Performing Loans (NPL), and profitability on state-owned banks in Indonesia throughout the period of 2019-2023. This research seeks to gain a comprehensive understanding of the factors that impact the profitability of state-owned banks in Indonesia. It aims to analyze relevant data to explore the relationship between these variables and their long-term effects on the financial performance of the banks.

The Capital Adequacy Ratio (CAR), Total Asset Turnover (TATO), and Non-Performing Loans (NPL) are all factors that have an effect on the profitability of state-owned banks that are listed on the IDX. The purpose of this study is to investigate and assess the correlation between these three factors and profitability. One of the most important metrics that reveals a bank's ability to generate profits is its profitability as a business. The independent factors that were chosen for this study were picked on the basis of their theoretical capacity to have an effect on profitability, which is the dependent variable that being investigated in this study. More information can be found in the following image of the thinking framework:

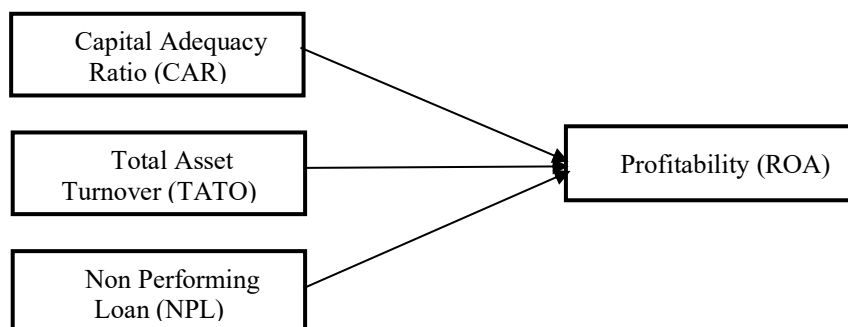


Figure 1. Theoretical Framework

This research provides empirical evidence that illustrates the influence of three important elements on the profitability of State-Owned Enterprise (BUMN) banks in Indonesia, through a comprehensive and in-depth study. The Capital Adequacy Ratio (CAR), as one of the variables taken into account, reflects the bank's capacity to protect itself from various financial risks and is a crucial indicator in assessing the bank's financial health. Optimum CAR conditions, through sufficient capital, provide encouragement to stability and the bank's ability to earn profits. On the other hand, efficient Total Asset Turnover (TATO) indicates capable asset management, which not only contributes to increasing profit margins, but also strengthens the bank's overall profitability. Meanwhile, Non-Performing Loans (NPL), as an indicator of the quality of a bank's credit portfolio, provides an idea of how large the number of loans are in failure or at high risk. A large proportion of NPLs can be problematic, with the potential to cut bank interest income and directly affect profitability levels. Using the conceptual framework provided, it is possible to formulate several hypotheses in the following manner:

- Hypothesis 1 (H1): There is a positive and significant influence of the Capital Adequacy Ratio (CAR) on profitability in state-owned banks listed on the Indonesian Stock Exchange.
- Hypothesis 2 (H2): There is a positive and significant influence of Total Asset Turnover (TATO) on Profitability of state-owned banks listed on the Indonesian Stock Exchange.
- Hypothesis 3 (H3): There is a negative and significant influence of Non-Performing Loans (NPL) on profitability in state-owned banks listed on the Indonesian Stock Exchange.

II. METHODS

This study employs a quantitative research methodology with a causal approach. Quantitative research is a study methodology that relies on objective and measurable facts in the form of numerical values. These data are then analyzed using statistical techniques to draw definitive conclusions [22]. The causal approach is a research method that seeks to study the cause and effect relationship and influence between variables [23]. A population refers to a broad category of things or persons that possess specific features and characteristics, which are identified by researchers for the purpose of study and drawing conclusions [22]. The population for this study consisted of four state-owned banking sector enterprises that were registered on the IDX during the data gathering period spanning from 2019 to 2023. The sample is a subset of the population under study, selected based on certain characteristics [24]. The sampling technique employed in this research is a non-probability sampling technique, specifically a saturation sampling type. This strategy does not offer equal chances for all members of the population to be picked as samples. The saturated sampling approach refers to a kind of sampling where all members of the population are included as samples[22]. For more details, see the sample criteria table below:

Table 1. Sample criteria

Criteria	Description
Population	Four state-owned banking companies listed on the Indonesia Stock Exchange (IDX) during the 2019-2023 data collection period
Sampling Techniques	Non-probability sampling techniques, especially saturated sampling types.
Sampling Approach	Saturated sampling refers to a type of sampling in which all members of the population are included as a sample
Sample	Bank Mandiri, Bank BRI, Bank BNI, and Bank BTN
Time period	Data was collected from 2019 to 2023
Total Data Points	20 data points (referring to 4 companies over 5 years)

Source: Processed data, 2024

This study makes use of financial records that were collected from banks that are listed on the Indonesia Stock Exchange (IDX) during a continuous period of five years, beginning in 2019 and ending in 2023. The financial reports that are available on the website www.idx.o.id serve as the source of information for this study, which was conducted using those reports. For the purpose of the research, the documentation approach was utilized as the method of data collecting. The data for this study came from firm financial records that were made accessible to the public, more specifically quarterly financial reports, and they covered the years 2019 through 2023. The website that was described earlier was utilized in order to gain access to the records. A quantitative analytic technique known as multiple regression analysis was utilized for the purpose of conducting the research's data analysis. Tests for normality, multicollinearity, heteroscedasticity, and autocorrelation are included in the classical assumption test, which must be satisfied by the equation for multiple linear regression. This set of tests was carried out with the assistance of SPSS 25.0 for Windows. In the course of this investigation, the equation that was utilized for multiple linear regression is as follows:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3$$

Information:

a : Constant

- b1,b2,b3 : Regression coefficient parameters for each variable
- X1 : Capital Adequacy Ratio (CAR)
- X2 : Total Asset Turnover (TATO)
- X3 : Non Performing Loans (NPL)
- Y : Return On Assets (ROA)

III. RESULTS

1. Classical Assumption Test

The inferential statistical analysis, which includes the t test, regression analysis, and analysis of variance (ANOVA), is carried out following a series of tests that are collectively referred to as the classic assumption test. Before beginning the inferential statistical analysis, several checks are carried out to ensure sufficient information. As an illustration, the classical assumption test includes the following:

a) Data Normality Test

The Kolmogorov Smirnov test was conducted to assess the normality of the data for the CAR, TATO, NPL, and ROA variables. The significant values obtained were 0.548, 0.128, 0.255, and 0.256, respectively. When the findings indicate a significance level greater than 0.05, it implies that the data for all the variables employed follow a normal distribution.

Table 2. Kolmogorov-Smirnov Test Results

	CAR	TATO	NPL	ROA
N	20	20	20	20
Normal Parameters	Mean	.0998	1.99852	1.36644
	Std. Deviation	17.0193	.017822	1.32245
Most Extreme Differences	Absolute Positive	.166	.111	.124
	Negative	.166	.111	.124
Kolmogorov-Smirnov Z		-.089	-.089	-.114
Asymp. Sig. (2-tailed)		.983	1.187	.923
		.548	.128	.255

a. Test distribution is Normal.
 Source: Processed data, 2024

b) Multicollinearity Test

The Variance Inflation Factor, also known as the VIF statistic, is a well-known approach that is utilized for the purpose of determining multicollinearity. The variance inflation factor, often known as the VIF, is a factor that is used to measure the variation of the regression coefficients that is caused by multicollinearity. The presence of a high VIF score, especially one that is greater than 10, is indicative of significant multicollinearity. This might make the interpretation of the regression model more difficult.

Table 3. Multicollinearity Test

Model	Collinearity Statistics	
	Tolerance	VIF
1 CAR	.945	1,762
TATO	.918	1,915
NPL	.909	1,817

Dependent Variable: ROA
 Source: Processed data, 2024

According to the findings of the calculations that are reported in table 3, which can be found here, none of the independent variables have a tolerance value that is lower than 0.10. This is the conclusion that can be drawn from the given information. As a result of the implementation of the Variance Inflation Factor (VIF) computation, it has been demonstrated that none of the independent variables have a VIF value that is higher than 10. The process of carrying out the computation led to the discovery of this information. It is feasible to get the conclusion that the regression model does not contain any sign of multicollinearity among the variables that are independent. This is the conclusion that can be drawn.

c) Heteroscedasticity Test

[22] The heteroscedasticity test is a statistical method that is utilized to determine whether or not the regression model contains a heteroscedasticity issue. A regression model is said to exhibit heteroscedasticity when the variance of the errors, also known as residuals, in the model does not remain constant across the whole range of values of the independent variables. To put it another way, there is a

consistent pattern in the variability of the mistakes that is not connected to the variable that is being measured.

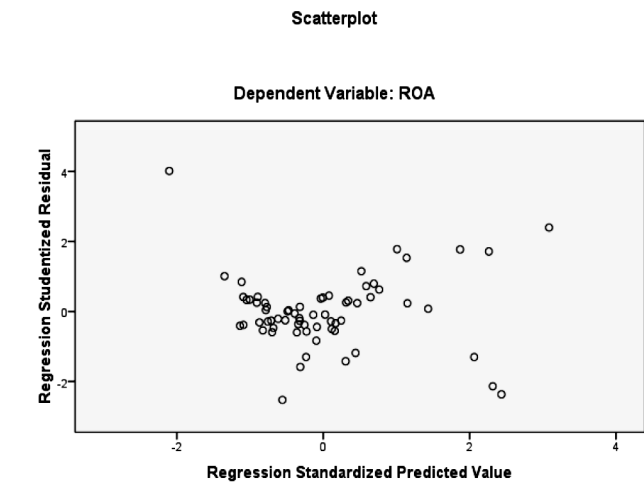


Figure 2. Heteroscedasticity Test

The scatterplot graph demonstrates that the points are distributed in a manner that is both random and uniform above and below the Y axis, which is represented by the number 0. This is indicated by the fact that the points are spread randomly. Due to the fact that the regression model does not display any discernable pattern or trend of data variability, which is often referred to as heteroscedasticity due to the qualities that it possesses, it is clear from this that the model does not exhibit any such pattern or trend. Consequently, it is possible to arrive at the conclusion that the regression model is suitable for the purpose of making predictions concerning Return on Assets (ROA).

d) Autocorrelation Test

The autocorrelation test is performed to determine if there is a correlation between the residual errors in period t and the residual errors in the previous period ($t - 1$) in the linear regression model. The presence of autocorrelation in the data can be ascertained by examining the values of d . Autocorrelation is absent if d is within the range of dU to $4-dU$. However, if the value of d is smaller than dL or more than $4-dL$, then the data does exhibit autocorrelation. If the value of d is within the range of dL to dU or $4-dU$ to $4-dL$, it is not possible to make any conclusions on the presence of autocorrelation. [23].

Table 4. Autocorrelation Test

Model	Durbin-Watson
1	1.892 ^a

a. Predictors: (Constant), CAR, TATO, NPL

b. Dependent Variable: ROA

Source: Processed data, 2024

Table 4 contains the Durbin-Watson value of 1.937. By employing a significance level of 5%, a sample size of 20 (n), and a set of three independent variables, we shall assess the discrepancy between this value and the Durbin-Watson table value of 1.90. Based on the Durbin-Watson value exceeding the upper limit (dU) of 1.90 and falling below the threshold of $4 - 1.90$ ($4 - dU$), it is possible to infer the absence of either positive or negative autocorrelation.

2. Multiple Regression Analysis

After evaluating the analytic criteria and verifying the core regression assumptions, the next step is to do rigorous model testing and interpret the regression model. This is conducted to ascertain whether the independent variable exerts a partial or simultaneous impact on the dependent variable. Perform a statistical analysis on it using the t -test and F -test values. [24].

Table 5. Multiple Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	.879	.158		6.198	.000
CAR	2.630	.722	.316	7.332	.000
TATO	.112	.011	.154	5.063	.013
NPL	-.195	-.029	-.152	-6.578	.000

a. Dependent Variable: ROA

Source: Processed data, 2024

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + e_i$$

$$Y = 0,316X_1 + 0,154X_2 + 0,852X_3$$

Based on table 5 above, the following analysis can be carried out based on the linear regression model presented previously:

- a) The regression coefficient for the CAR variable is 0.316, indicating a positive relationship. This means that if CAR grows by 1% while holding the other variables (TATO and NPL) unchanged, ROA will increase by 3.16%. Conversely, if the CAR declines by 1% while holding other factors (TATO and NPL) constant, the ROA will decrease by 3.16%.
- b) The regression coefficient for the TATO variable is 0.154, indicating a positive relationship. This means that if TATO grows by 1% while keeping the other variables (CAR and NPL) constant, ROA will increase by 1.54%. Conversely, if TATO undergoes a 1% decline while holding other factors (CAR and NPL) constant, then ROA will decrease by 1.54%.
- c) The regression coefficient for the non-performing loan (NPL) variable is 0.152, indicating a negative relationship. This means that if NPL grows by 1% while holding the other variables (CAR and TATO) constant, the return on assets (ROA) will decline by 1.52%. Conversely, if the non-performing loans (NPL) reduce by 1% while keeping other factors (capital adequacy ratio [CAR] and total asset turnover [TATO]) unchanged, the return on assets (ROA) will increase by 1.52%.

3. Determination Coefficient Test

The determination test, also known as the coefficient of determination test, is a statistical technique that is utilized to assess the degree to which a linear regression model is able to account for changes in the variable that is being studied. According to Neuman & Robson (2020), the coefficient of determination is a statistical measure that quantifies the degree to which the independent variable in the regression model is able to account for the overall variance that is seen in the dependent variable.

Table 6. Coefficient of Determination Results

Model	R Square	Adjusted R Square	Std. Error of the Estimate
1	.741	.753	.17829

a. Predictors : (Constant), CAR, TATO , NPL

Source: Processed data, 2024

The adjusted R-squared coefficient in table 6 is 0.753, which is equivalent to 75.3%. The value indicates that 75.3% of the profitability level (ROA) of state-owned banks can be accounted for by independent variables, namely Capital Adequacy Ratio (CAR), Total Asset Turnover (TATO), and Non-Performing Loans (NPL), while the remaining 24.7% is attributed to factors not considered in this analysis. The adjusted R-squared value of 75.3% indicates a relatively strong correlation between the independent variable and the dependent variable, suggesting that the independent variable has a significant ability to explain the variation in the dependent variable.

4. F-test

The SPSS result indicates that the combined impact of the independent variables CAR, TATO, and NPL on the return on assets (ROA) of state-owned banks is presented in table 6 as follows:

Table 7. F Test Results

ANOVA^b

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	3,863	3	5,612	8,981	0,000a
Residual	0,792	16	0,112		
Total	4,655	19			

a. Predictors : (Constant), CAR, TATO, NPL

b. Dependent Variable: ROA

Source: Processed data, 2024

The F test is utilized in simultaneous testing to evaluate the relationship between the dependent and independent variables simultaneously. The statistical significance of the value indicated by the F test results in Table 7 is supported by a probability level of 0.000, which is less than the predetermined significance level of $\alpha = 5\%$ (0.05). The F value of 8,981 that was computed surpasses the essential F value of 2.316. This indicates that from 2019 to 2023, CAR, TATO, and NPL will have a significant impact on the profitability (ROA) of state-owned banks.

5. T-test

The t-test is a statistical method that is utilized in regression analysis for the purpose of determining whether or not each regression coefficient is statistically significant on its own. The primary objective of the t test is to ascertain whether or not the regression coefficient that corresponds to each independent variable in the regression model exerts a substantial influence on the variable that is being tested [25].

Table 8. T Test Results

Model	t	Sig.
1 (Constant)	6.198	.000
CAR	7.332	.000
TATO	5.063	.013
NPL	-6.578	.000

Source: Processed data, 2024

According to the analysis results presented in table 8 above, the following explanation can be provided:

- 1) The variable CAR exhibits a significant influence on the profitability of State-Owned Enterprise Banks, more specifically on return on assets (ROA). The significance of this finding is confirmed by the calculated t-value of 7.332, which exceeds the t-value listed in the table (1.980). H01 is rejected in favor of H2 with a significance level of 0.000 less than $\alpha = 5\%$ (0.05). This confirms that the CAR variable has a positive and statistically significant impact on ROA for State-Owned Enterprise Banks from 2019 to 2023. This suggests that an increase in the CAR value of a state-owned bank results in a corresponding amplification of the impact on the bank's asset return rate. This indicates the implementation of judicious risk management strategies, which in turn improves the returns for shareholders or investors. An increased CAR indicates that a bank has enhanced financial resilience and diminished risk exposure. An augmentation in financial stability fosters investor confidence, which in turn attracts a greater volume of deposits and lending opportunities. As a result, income and return on assets (ROA) are elevated. Strong capital adequacy, as proposed by Adji (2021), demonstrates the ability of a financial institution to withstand potential losses and maintain solvency. Effective risk management strategies promote improved decision-making, reduce credit defaults, and enhance financial performance as a whole, ultimately leading to an increase in return on assets (ROA). Moreover, sufficient capital enables financial institutions to undertake expansion strategies through the diversification of revenue streams and the entry into novel businesses, thereby promoting increase in return on assets (ROA). The results of this study are consistent with the conclusions drawn by Widyastuti and Aini (2021) and Anindiansyah et al. (2020), clarifying the significant influence that adequate bank capital has on profitability. The CAR is an essential metric utilized to assess the ability of a bank to withstand failure risks in relation to its core capital. This highlights the tendency for banks that have adequate capital to demonstrate higher levels of profitability.
- 2) According to the findings of the regression analysis that has been carried out, the TATO variable has a considerable impact on the profitability of State-Owned Enterprise Banks, specifically the return on assets (ROA). The fact that the calculated t-value is at 5,063, which is higher than the essential t-value of 1.978 according to the t-table, demonstrates the significance of this finding. As a result of the fact that the calculated t-value (5.063) is higher than the tabulated t-value (1.978) and that the significance level is 0.000, which is lower than the threshold of $\alpha = 5\%$ (0.05), the null hypothesis (H02) is rejected, while the alternative hypothesis (H2) is accepted. This indicates that the TATO variable has a positive and significant impact on the return on assets (ROA) in State-Owned Enterprise Banks during the period of 2019-2023. This suggests that financial institutions that are able to demonstrate a higher level of efficiency in the usage of their total assets are more likely to generate higher returns on these assets. Furthermore, a higher TATO indicates that the assets are being utilized effectively for the generating of income. Because of this efficiency, asset-to-income conversion is improved, which in turn leads to an increase in return on assets [11]. Additionally, increased revenue is often the outcome of effective exploitation of assets. Banks have the ability to widen their commercial operations, attract a wider clientele, and strengthen income creation through the proper usage of their assets, which ultimately contributes to an increase in return on assets (ROA). In addition, effective management of assets can reduce the costs of operations effectively. Banks are able to reduce costs that are not necessary and maximize resource allocation by making prudent use of their assets, which further increases their return on assets. The findings of this research are consistent with those of Aini et al., (2020) and [20], highlighting the positive association between asset efficiency (TATO) and profitability, which is demonstrated by an increase in ROA. The results of this study provide credence to the findings of previous research, thereby reiterating the connection between the TATO variable and the profitability of businesses.
- 3) In the context of State-Owned Enterprise Banks, the non-performing loan (NPL) variable displays a significant significance in relation to profitability, notably return on assets (ROA). The t-value that was computed was -6.578, which is significantly higher than the t-value that was tabulated, which was -1.978. This significance may be seen. With a significance level of 0.000, which is below the threshold of $\alpha = 5\%$

(0.05), the null hypothesis (H0) is rejected, while the alternative hypothesis (H3) is accepted. This indicates that the non-performing loan (NPL) variable has a substantial and negative impact on return on assets (ROA) in State-Owned Enterprise Banks throughout the period of 2019-2023. Consequently, this indicates that the profitability level of the bank, as measured by ROA, decreases as the amount of non-performing loans (NPL) increases. As a consequence of this, a bank that is struggling with a large number of non-performing loans (NPLs) is likely to have a decrease in profitability as a result of the losses that are sustained from non-performing loans. [11] Non-performing loans (NPLs) are loans that are not likely to be repaid, which results in the loss of potential income for the bank. The loss in income has a direct impact on the bank's ability to generate profits, which in turn leads to a decrease in return on assets. In addition, the bank is frequently required to incur additional costs as a result of non-performing loans. These costs include legal fees, collection fees, and provisioning for possible losses. As a result of these expenses, the profitability of the bank is further reduced, which leads to a decrease in ROA. Furthermore, a higher non-performing loan (NPL) level indicates a decline in the asset quality of the bank, which suggests that loans are allowed to be extended to borrowers who have a higher risk of defaulting on their payments. Due to this deterioration, the total risk profile of the bank is increased, which in turn reduces investor trust, hinders the generation of profits, and ultimately leads to a decrease in return on assets. The findings of this research are consistent with those of [12] and [13], which shed light on the negative and significant link that exists between non-performing loans and return on assets. This highlights the damaging influence that non-performing loans have on the profitability of banks and their overall financial well-being. An increase in the number of nonperforming loans (NPL) can put a significant pressure on the financial performance of a bank, reduce the capacity of the bank to generate profits for its stakeholders, and even put the bank's solvency at risk.

IV. CONCLUSIONS

The primary purpose of this study is to discover factors that influence profitability, with a particular focus on Return on Assets (ROA). For the purpose of this study, the analysis is based on independent variables such as the capital adequacy ratio (CAR), total asset turnover (TATO), and non-performing loans (NPL), with profitability (ROA) serving as the dependent variable. The following are some of the conclusions that can be derived from the framing of the problem, the findings of the data analysis, and the discussions that took place in the chapter before this one: The first hypothesis is accepted since the findings of the research indicate that CAR has a positive and significant influence on ROA. This indicates that the first hypothesis is correct. To put it another way, the likelihood of the bank improving its profitability is proportional to the degree to which the capital adequacy ratio of the bank is higher. The evidence presented here demonstrates that the presence of adequate capital in a bank can offer protection against risk and improve the financial performance of the bank. In addition, the findings of the research show proof that TATO has a favorable and significant influence on ROA, which indicates that the second hypothesis is accepted. The conclusion that can be drawn from this is that the likelihood of a firm's profitability increasing is proportional to the degree to which the company is able to create sales by utilizing its overall assets in an efficient manner. Consequently, businesses have the opportunity to boost their profitability by improving the efficiency with which they utilize their overall assets. This can be accomplished by the use of measures such as boosting operational efficiency, improving inventory management, or simplifying cost structures in order to make them more efficient. The third hypothesis is accepted since the findings of the research indicate that NPL has a negative and significant effect on ROA. This indicates that the third hypothesis is correct. It is clear from this that the bank's profits will decline in proportion to the number of loans that the debtor is unable to repay after taking out. Because of the potential impact it can have on the banks' financial health and the continuity of their operations, this is a major reason for concern. As a result, credit risk management needs to be improved in order to maximize the reduction of non-performing loans (NPLs) and preserve the profitability of banks.

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