Journal of Economics, Finance and Management Studies

ISSN (print): 2644-0490, ISSN (online): 2644-0504

Volume 08 Issue 02 February 2025

Article DOI: 10.47191/jefms/v8-i2-47, Impact Factor: 8.317

Page No: 1254-1266

Determinants of Bank Profitability in Indonesian Stock Exchange

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ABSTRACT: This study aims to analyze the factors that affect profitability in the banking sector. The research method used is quantitative with a multiple regression approach. The independent variables used are *Capital Adequacy Ratio* (CAR), *Loan to Deposit Ratio* (LDR) and *Non-Performing Loan* (NPL) while the dependent variable used is Return On Asset (ROA) as Profitability. The research data consists of annual reports of state-owned banks for the period 2019 - 2023 obtained through the *non-probability sampling method.*The results of the study indicate that CAR and NPL have a significant positive effect on ROA (Profitability), while LDR does not show a significant effect on ROA (Profitability). Evaluation of Consistency and trends in financial performance from year to year can provide insight into the stability of long-term growth and can identify possible risks and opportunities that can be utilized.State-owned banks can identify areas that require more attention in more effective capital risk management and liquidity management. State-owned banks can identify factors that affect their profitability. In this case, state-owned banks can adjust their strategies, such as increasing operational efficiency, diversifying revenue, or improving credit processes, to increase their profitability.

KEYWORDS: Capital Adequacy Ratio, Loan to Deposit Ratio, Non-Performing Loan, Return On Assets, Annual Report.

I. INTRODUCTION

The world of banking is considered the lifeblood of driving the wheels of a country's economy and is part of the monetary system that has a strategic position as a supporter of economic development. Bank performance in Indonesia in the current era is always fluctuating and the results are obtained cannot be easily predicted.cProfitability is considered to be an indicator of performance bank. Where the level of profitability of the bank is very high influenced by internal factors (Hidayat et al.,2020). The banking sector in Indonesia has a role that important in community activities, especially incollect funds from the public and then distribute them returning in the form of credit is one of the activities banking industry, the goal is to make a profitin its activities. One aspect that can be seen in financial performance, namely by knowing the reports the banking company's finances, is the company are able to carry out banking activities well or not. This can cause growth in banking in Indonesia if public trust to banking can be influenced by the performance that has been achieved by banking companies that carry out their activities Likewise, vice versa if performance within the company is bad then the public's sense of trust in banking will increase experienced a decline (Pratama, 2021). Assessment of The performance of a bank can basically be done by analyze the financial reports of the bank concerned. From financial reports, cash flow, and other related information with bank performance (Setyowati and Budiwinarto,2017). Financial report analysis activities provide an overview detailed interpretation results and calculations regarding achievements obtained by the company, and the problems that may arise after conducting financial report analysis. By analyzing the financial reports, the management companies can find out the company's financial status during a certain period. Analysis financial reports can also be used by the government, business actors and investors and users of financial reports others who analyze financial reports, so that the data data from financial reports can be simplified into ratios ratio whose interpretation is easy to understand compared to read financial reports directly. (Capital Adequacy Ratio), which is the ratio used by banks to meet bank capital. The CAR safe limit set is a minimum of 8%, This is useful to protect customers and maintain stability of the financial system as a whole. “According to Darmawi (2018) one of the components of the capital factor is capital adequacy. CAR is the capital adequacy ratio which accommodates the risk of loss that may be faced by the bank.“ “The higher the capital adequacy ratio, the higher strong bank ability to withstand credit/asset risk productive risk.” The Liquidity element is represented by Loan to Deposit Ratio (LDR) is the ratio used to measure the amount of credit given compared to the amount of funds from the community

and the amount of own capital used (Kasmir, 2019). According to Dendawijaya (2019) "if the growth in the amount of credit is greater than growth of funds collected, then this will make the LDR value higher, if the LDR value is higher high, then the liquidity capacity of the bank concerned will be lower". "This is because the number of the funds needed to raise credit will increase big." Therefore, as long as these banks can allocate its credit optimally, increase LDR (Loan to Deposit Ratio) will cause an increase in ROA (Return On Assets). According to Bank Indonesia regulations No.11/25/PBI/2009 credit risk is the risk resulting from failure debtors and/or other parties in fulfilling their obligations to bank. Credit risk comes from fund distribution activities and other commitments, this risk arises because the borrower does not can fulfill its financial obligations to the bank at the time due date. Failure to fulfill customer obligations to bank causes loss by not accepting previously estimated receipts. While Non Performing Loan (NPL) is the rate of return credit given by depositors to banks, in other words Non Performing Loan (NPL) is the level of credit at the bank (Harahap & Hairunnisah, 2017).

In granting credit to customers, the bank will faced with the risk of credit that cannot be paid by debtors, thus giving rise to problematic credit. For knowing the quality of assets can be known or measured by using the Non-Performing Loan (NPL) ratio. Non-Performing Loan (NPL) describes the percentage of credit banking default. Maximum Non Performing Loan (NPL) permitted by Bank Indonesia is 5%. So if a bank has a Non Performing Loan (NPL) exceeds 5% then banking liquidity will be disrupted, because the bank has to pay its short-term obligations to the customer if the customer disburses funds. Low percentage of Non-Performing Loans (NPL) and the stability of the Loan to Deposit Ratio (LDR) means that investors will interested in investing capital and influencing stock price. This study uses Return On Asset (ROA) on profitability to measure financial performance, so that by increasing ROA it means that the existing profit is in a company increases which has an impact on increasing profitability itself. Profitability ratio is a ratio to assess the company's ability to seeking profit. This ratio also provides a measure of the level of effectiveness of a company's management. The point is The use of this ratio shows the efficiency of the company (Kasmir, 2019). According to Anwar (2019) Return On Asset is the company's ability to generate profits on the assets owned. The company can be said to be increasingly profitable if the ROA gets bigger, and it is said increasingly unprofitable if the ROA is smaller. Through This research is expected to determine the influence of aspects the selected independent variables against the increase or decrease in return on assets owned by the bank. This study observes the performance of state-owned banks. listed on the Indonesia Stock Exchange before and after the pandemic Covid-19, namely in 2019-2023 as the object of research. Selecting state-owned banks as the research object for analysis bank financial performance before and after Covid-19 has a number of strong reasons. Namely, state- owned banks represent group of banks that have a crucial role in economic stability of a country. The involvement of these banks in monetary policy and their role in supporting real sector makes their performance analysis important to understand the impact of the pandemic on the economy as a whole overall. In addition, state-owned banks cover various types of banks including commercial banks, investment banks and central banks. By taking samples from various types of banks, the research can provide a comprehensive picture of how various banking segments are responding to the challenges economy faced during the pandemic. Performance analysis finance before and after the pandemic in banking groups These different perspectives can provide more insight. in-depth about the variations in impact and strategies implemented by each bank. Overall, choosing State-Owned Banks as the subject research provides a strong foundation for obtaining a holistic understanding of changes in financial performance bank all the time, before and after the Covid-19 pandemic 19, and be able to explore possible variations. at various levels and banking sectors

Table 1.1 Research Data

No	Kode Perusahaan	Tahun	CAR	LDR	NPL	ROA
1	BBNI	2019	19,73%	91,54%	1,26%	2,40%
		2020	16,80%	90,52%	0,98%	0,57%
		2021	19,74%	79,71%	0,73%	1,40%
		2022	19,27%	84,25%	0,49%	2,50%
		2023	22,00%	85,80%	0,61%	2,60%
2	BMRI	2019	21,39%	96,37%	0,84%	3,03%
		2020	19,71%	82,95%	0,43%	1,64%
		2021	19,56%	80,04%	0,41%	2,53%
		2022	19,65%	77,61%	0,26%	3,30%
		2023	21,91%	86,75%	0,29%	4,03%
3	BBRI	2019	22,55%	88,64%	1,04%	3,50%
		2020	20,61%	83,66%	0,80%	1,98%
		2021	25,28%	83,67%	0,70%	2,72%
		2022	23,30%	79,17%	0,73%	3,76%
		2023	25,23%	84,73%	0,76%	3,93%
4	BBTN	2019	17,32%	113,50%	2,96%	0,13%
		2020	19,34%	93,19%	2,06%	0,69%
		2021	19,14%	92,86%	1,20%	0,81%
		2022	20,17%	92,65%	1,32%	1,02%
		2023	20,16%	95,36%	1,32%	1,07%

Source: Data Processed by Author (2024)

Based on table 1.1, the impact of the Covid-19 pandemic can be seen from 2019-2020, the CAR value decreased due to weak performance of the Company which caused a decline Company profitability. CAR decreased due to the existence of increase in the amount of ATMR which is a calculation capital allowance after considering risks which may occur in the creation of bank assets, where credit to third parties dominates in creation the assets. But the bank can still control them. so it doesn't reach below 8%. In 2021-2023 state-owned banks have experienced an increase in their implementation of the method good performance in that year so that it made CAR to be better. In 2019-2023, LDR experienced fluctuations. Conditions Community economy also influences credit demand and the amount of savings. If third party funds slow down, then there will be a tightening of the Loan to Deposit Ratio (LDR). The credit distribution trend will also slow down, Loan to The banking Deposit Ratio (LDR) will then be included loosening. This is also influenced by the growth of DPK NPL in 2019-2023 experienced fluctuations significantly due to the decrease in the number of credits problematic, if the NPL ratio is high then the banking sector must reserve larger funds so that capital from the bank will decrease and cause a decrease in income the bank itself. From the high NPL ratio also illustrates the low health of the bank because it is increasingly many bank loans are problematic. Bad credit in a bank will never be possible to be eliminated but as much as possible the banking sector can suppress there is bad credit because as explained above When NPL is high it will reduce the bank's Health Level. Banks with a low Health Level will affect various aspects of its performance.

II. RESEARCH METHODS

Research Object

According to Sugiyono (2019), the object of research is a attributes of people, objects or activities that have variations of course, what is determined by the researcher to be studied and then conclusions are drawn. Based on background and theoretical studies developed on financial reports at State-Owned Enterprise Banks listed on the Stock Exchange Effects of Indonesia for the period 2019-2023, there are variables that affect Return On Asset (ROA) to measure Company profitability. So in this study raises several factors that can affect ROA, namely CAR, LDR and NPL at State-Owned Enterprise Banks Countries listed on the Indonesia Stock Exchange for the period 2019-2023.

Population

According to Sugiyono (2019) population is an area generalization consisting of objects or subjects that have certain qualities and characteristics to be studied and conclusions are drawn. The population in this study is Banking companies, namely State-Owned Enterprise Banks listed on the Indonesia Stock Exchange (IDX). Period Observations with a time span of 5 years, namely from 2019-2023 It is expected to produce sufficient samples and can generalized.

Table 3.1 List of State-Owned Banks Listed on the Stock Exchange Indonesia 2019-2023

No	Kode Saham	Nama Bank	Tanggal IPO
1	BBNI	PT Bank Negara Indonesia (Persero) Tbk	25-09-1996
2	BMRI	PT Bank Mandiri (Persero) Tbk	14-07-2003
3	BBRI	PT Bank Rakyat Indonesia (Persero) Tbk	10-09-2003
4	BBTN	PT Bank Tabungan Negara (Persero) Tbk	17-12-2009

Source: www.idx.co.id Sample

Sample is a part of the total number and characteristics characteristics possessed by the population in question. If the population has a large number and characteristics that complex, then researchers may not be able to study the entire population because it is limited by funds, time and resources other power. Therefore, researchers can use sample as a representation of the population taken from A small portion of the population to be used as research objects (Sugiyono, 2019). Sampling technique is a procedure or technique sampling used to determine sample to be taken from the population in a research (Sugiyono, 2019). The sampling technique used in this study is *non-probability sampling.* According to Sugiyono (2019), *non-probability sampling* is a technique sampling Where not all elements or members population has an equal chance of being selected as sample. The type of *non-probability sampling* used in This research is a total sampling or census. According to Sugiyono (2019), total sampling or census is a technique sampling Where all members of the population become an object of research or be used as a sample without except. The use of census techniques is due to the population less than 100.

a) Types and sources of data

In this study the author uses data secondary, where data is obtained from reports finances that have been published by the Bank Indonesia in Indonesian banking statistics in official website https://www.ojk.go.id/ Data periodization using annual

published financial reports period 2019-2023.

Method of collecting data

In this research, the author collected data using Library study and documentation methods, according to Sugiyono (2019) Literature study is a theoretical study, references and other scientific literature related to culture, values and norms that develop in the social situation being studied. Data which is taken in the form of *the Capital Adequacy Ratio* (CAR) variable, *Non-Performing Loans* (NPL), *Loan to Deposit Ratio* (LDR), and *Return On Assets* (ROA) obtained either way directly quoting or processing financial report data from the Indonesian banking directory (2019-2023) and data issued by the Indonesia Stock Exchange (BEI).

Research Variables

According to Sugiyono (2019), research variables are everything something in any form determined by the researcher to be studied so that information is obtained about things then the conclusion is drawn. In this study There are several variables.
Among them are dependent variables and independent variables.

Independent Variables

According to Sugiyono (2019) the independent variable variable is a variable that influences or that be the cause of the change or emergence of the dependent variable (bound)

1. CAR (Capital adequacy Ratio)
2. NPL (Non-Performing Loan)
3. LDR (Loan to Deposit Ratio)

Dependent Variable

According to Sugiyono (2019) the dependent variable is a variable that influences or is the cause of the change or the emergence of dependent variables (bound). Variables in This research is profitability measured by *Return*
Return on Assets (ROA).

Operational Definition and Measurement of Variables Operational Definition

Operational definition of a variable is an attribute, characteristic or the value of an object or activity that has certain variations which has been determined by researchers to be studied and then the conclusion is drawn. Sugiyono (2019).

Dependent Variable

***Return On Assets* (ROA)**

ROA is one of the profitability ratios. ROA able to measure the Company's ability to produce profits in the past for later on project into the future. According to Kasmir (2019) *Return On Asset* is a ratio that shows the results of the amount of assets used in the company. ROA is the most important ratio good to use to measure the level bank efficiency, because ROA reflects the ability bank management in allocating its assets to generate profit. ROA can be formulated as follows:

Independent Variables

1. **Capital Adequacy Ratio (CAR)**

The capital adequacy ratio serves to accommodate risk of loss that the bank may face. The higher the CAR, the better the ability the bank to bear the risk of each credit or productive assets at risk. Capital Adequacy Ratio (CAR) is a ratio that shows how far all bank assets contain risk (credit, investments, securities, bills on other banks) are also financed from the bank's own capital funds besides obtaining funds from sources outside the bank, such as community funds, loans (debt), and others. According to Kasmir (2019) Capital Adequacy Ratio (CAR) is the ratio used to knowing the magnitude of the estimated risk that will occurin providing credit.

The CAR ratio can be formulated as:

$$\text{CAR} = \frac{Jumlah\ Modal}{Jumlah\ Aktiva\ Menurut\ Risiko\ (ATMR)} X\ 100\%$$

Variabel Dependen

***Return On Asset* (ROA)**

ROA is one of the profitability ratios. ROA able to measure the Company's ability to produce profits in the past for later on project into the future. According to Kasmir (2019) *Return On Asset* is a ratio that shows the results of the amount of assets used in the company. ROA is the most important ratio good to use to measure the level bank efficiency, because ROA reflects the ability bank management in allocating its assets to generate profit.

ROA can be formulated as follows:

$$\mathbf{ROA} = \frac{\boldsymbol{Laba\ Bersih}}{\boldsymbol{Total\ Aset}} \boldsymbol{X}\ \mathbf{100\%}$$

Variabel Independen

1. ***Capital Adequacy Ratio*** **(CAR)**

The capital adequacy ratio functions to accommodate the risk of losses that may be faced by the bank. The higher the CAR, the better the bank's ability to bear the risk of any risky credit or productive assets. Capital Adequacy Ratio (CAR) is a ratio that shows the extent to which all bank assets that contain risk (credit, investments, securities, claims on other banks) are financed from the bank's own capital funds in addition to obtaining funds from sources outside the bank, such as public funds, loans (debt), etc. According to Kasmir (2019) Capital Adequacy Ratio (CAR) is a ratio used to determine the estimated risk that will occur in providing credit.

Rasio CAR can be formulated as follows:

$$\mathbf{CAR} = \frac{\boldsymbol{Jumlah\ Modal}}{\boldsymbol{Jumlah\ Aktiva\ Menurut\ Risiko\ (ATMR)}} \boldsymbol{X}\ \mathbf{100\%}$$

2. ***Loan to Deposit Ratio*** **(LDR)**

The ratio between the volume of credit disbursed by banks and the number of recipients of funds from various sources. Loan to Deposit Ratio is also called the ratio of credit to total third party funds which is used to measure third party funds distributed in the form of credit.

According to Kasmir (2019) Loan to Deposit Ratio (LDR) is a ratio to measure the composition of the amount of credit given compared to the amount of public funds and own capital used. Loan to Deposit Ratio (LDR) can be used to assess a bank's management strategy. Conservative bank management usually has a relatively low Loan to Deposit Ratio (LDR), whereas aggressive management has a Loan to Deposit Ratio that is high or exceeds the tolerance limit. The higher the Loan to Deposit Ratio, the higher the company's profits (assuming the bank is able to distribute credit effectively, so the number of
bad loans will be small). The safe limit for LDR according to government regulations is a maximum of 110%. An important aim of calculating LDR is to find out and assess to what extent the bank has a healthy condition in carrying out its operations or business activities. In other words, LDR is used as an indicator to determine the level of vulnerability of a bank.

Loan to Deposit Ratio can be formulated as follows:

$$\mathbf{LDR} = \frac{\boldsymbol{Kredit}}{\boldsymbol{Dana\ Pihak\ Ketiga}} \boldsymbol{X}\ \mathbf{100\%}$$

3. ***Non-Performing Loan*** **(NPL)**

Non-Performing Loans are non-performing loans which are one of the keys to assessing the quality of a bank's performance. This means that NPLs are an indication of problems within the bank and if a solution is not immediately obtained it will have a dangerous impact on the bank.

According to Ismail (2018) Non Performing Loan (NPL) is credit that has been distributed by the bank and the customer cannot make payments or make installments in accordance with the agreement signed by the bank and the customer Based on the definition above, it can be concluded that NPL is an indicator of the health of a bank's assets. These indicators can be in the form of basic financial ratios which are able to provide assessment information on capital conditions, profitability, credit risk, market risk and liquidity.

Problematic credit will result in bank losses, namely losses due to not receiving back the funds that have been distributed, as well as interest income that cannot be received. This means that the bank loses the opportunity to earn interest, which results in a decrease in total income (Ismail, 2018)

The NPL ratio can be formulated as follows:

$$\mathbf{NPL} = \frac{\boldsymbol{Total\ Kredit\ Bermasalah}}{\boldsymbol{Total\ Kredit\ yang\ dislaurkan}} \boldsymbol{X}\ \mathbf{100\%}$$

Analysis Method

According to Sugiyono (2019) data analysis is the process of systematically searching for and compiling data obtained from interviews, field notes and documentation by organizing the data into categories, describing it into units, synthesizing it, arranging it into patterns, choosing what is important and what will be studied, and making conclusions so that it is easily understood by

oneself and others. The data that has been collected and processed is in the form of numbers and analyzed quantitatively by hypothesis testing with the analysis model used, namely SPSS 26. SPSS (Statistical Product and Service Solution) is an application that has quite high statistical analysis capabilities as well as a data management system in a graphical environment using descriptive menus and simple dialog boxes so that it is easy to understand how to operate it.

Descriptive Analysis

This descriptive analysis provides an overview of the data seen from the average, maximum, minimum and standard deviation values of each variable.

Classical Assumption Test

The Classical Assumption Test is used to determine whether there are classical assumption problems in the regression model. There are 4 tests carried out in the Classic Assumption Test, namely Normality Test, Multicollinearity Test, Heteroscedasticity Test, and Autocorrelation Test.

Normality Test

According to Ghozali (2021), the normality test is carried out to test whether the residual variables are normally distributed in a regression model. A good regression model has residual variables that are normally distributed. Normality testing in this study used the One Kolmogorov-Smirnov test with a Monte Carlo approach.

According to Ghozali (2021), the One Kolmogorov-Smirnov normality test hypothesis is as follows: H0: Residual data is normally distributed

Ha: Residual data is not normally distributed

The basis for making decisions on the normality test is as follows:

(1) If Sig. (2-tailed) < 0.05, then reject H0, meaning the residual variable is not normally distributed.

(2) If Sig. (2-tailed) > 0.05, then do not reject H0, meaning the residual variable is normally distributed.

Heteroscedasticity Test

According to Ghozali (2021), the heteroscedasticity test is carried out to test whether there is an inequality of variance from the residuals of one observation to another in a regression model. If the variance from the residual from one observation to another is constant, it is called homoscedasticity and if it is different it is called heteroscedasticity. A good regression model is one that does not experience heteroscedasticity or experiences homoscedasticity.

Heteroscedasticity testing in this study used the Spearman test. The basis for decision making on the heteroscedasticity test is as follows:

(1) If the Sig. (2-tailed) < 0.05 then heteroscedasticity occurs.

(2) If the Sig. (2-tailed) > 0.05, then heteroscedasticity does not occur

Multicollinearity Test

According to Ghozali (2021), the multicollinearity test was carried out to test whether in the regression model there was a correlation between the independent variables. A good regression model has no correlation between independent variables. The basis for making multicollinearity test decisions is as follows:

(1) If the tolerance value is ≤ 0.10 and the variance inflation factor (VIF) value is ≥ 10, this means that multicollinearity has occurred.

(2) If the tolerance value is > 0.10 and the variance inflation factor (VIF) value is < 10, this means that multicollinearity does not occur.

Autocorrelation Test

According to Ghozali (2021), the autocorrelation test was carried out to test whether there was a correlation between confounding errors in period t and confounding errors in period t-1 (previously) in a linear regression model. A good linear regression model is one that is free from autocorrelation. Autocorrelation testing in research uses the Durbin Watson test. According to Ghozali (2021), the hypothesis to be tested is as follows:

H0: there is no autocorrelation Ha: there is autocorrelation

Multiple Linear Regression Analysis

To find out the effect of one variable affecting other variables. The regression model developed to test the hypothesis that has been formulated in this research is as follows:

$Y = a + \beta X1 + \beta X2 + \beta X3 + e$

Information

Y : *Return On Asset*

a: Konstanta

β: Koefisien Regresi Variabel

X1: *Capital Adequacy Ratio*
X2: *Loan to Deposit Ratio*
X3: *Non Performing Loan*
e: Standar Error

Hypothesis Testing

After carrying out the classical assumption test, the next step is to carry out a statistical test consisting of the t test, F test, and determination coefficient test (R2) to see whether there is an influence of CAR, NPL, and LDR on ROA and path analysis to analyze the pattern of relationships between variables with the aim of finding out the direct or indirect influence of a set of independent variables on the dependent variable.

Simultaneous Test (F Test)

The F test was carried out to determine the feasibility of the research regression model. Decision making criteria by taking the sig value. 0.05 (α = 5%). 50 The basis for decision making based on the anova table is as follows:

(1) If the Sig. ≤ 0.05 then the research regression model is feasible.
(2) If the Sig. > 0.05 then the research regression model is not feasible.

Partial Test (t Test)

This submission aims to show how much influence an independent variable individually has in explaining variations in the dependent variable. This test was carried out using a significance level of 0.05 (a=5%). Acceptance or rejection of the hypothesis is carried out using the following criteria:

a) If t Table < t Calculate and the significance value of t < 0.05 then H0 is rejected.
b) If t Table > t Calculate and the significance value of t > 0.05 then H0 is accepted.

This means that there is no significant influence between an independent variable on the dependent variable.

Coefficient of Determination Test (R2)

The coefficient of determination measures how far the model's ability to explain variations in the dependent variable. The coefficient of determination value is between zero or one. A small R2 value means that the ability of the independent variables to explain variations in the dependent variable is very limited. A value close to one means that the independent variables provide almost all the information needed to predict variations in the dependent variable. The fundamental weakness of using the coefficient of determination is that it biases the number of independent variables included in the model. Therefore, many researchers recommend using the adjusted R2 value when evaluating which regression model is best. Unlike R2, the adjusted R2 value can increase or decrease if one independent variable is added to the model. If in the empirical test the adjusted R2 value is negative, then the adjusted R2 value is negative, then the adjusted R2 value is considered to be zero. Systematically, if the value of R2 = 1, then adjusted R2 = R2 = 1, whereas if the value of R2 = 0, then the value of adjusted R2 is negative. (Ghozali, 2021).

III. Results and Discussion

Discussion Descriptive Analysis

Descriptive statistics are statistics used to analyze data by describing or illustrating the data that has been collected as it is without the intention of making general conclusions or generalizations (Sugiyono, 2019).

Table 4.3 Descriptive Statistics Test Results

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
CAR	20	16.80	25.28	20.6430	2.22466
LDR	20	77.61	113.50	88.1485	8.20063
NPL	20	.26	2.96	.9595	.63837
ROA	20	.13	4.03	2.1805	1.21073
Valid N (listwise)	20				

Source: data processed by SPSS26

Based on the results of descriptive statistical tests in the table above. It can be seen that the amount of data analyzed in this research is 20 data obtained from the annual reports of 4 state-owned banks listed on the Indonesia Stock Exchange during the 2019-2023 period.

Based on the table above it is known that:

1. Capital Adequacy Ratio (CAR) has an average value of 20.6430 which is greater than the standard deviation of 2.2246. This shows good data distribution, because it reflects smaller deviations.

2. Loan to Deposit Ratio (LDR) has an average value of 88.1485 which is greater than the standard deviation of 8.2006. This shows good data distribution, because it reflects smaller deviations.
3. Non-Performing Loans (NPL) have an average value of 0.9595 which is greater than the standard deviation of 0.6383. This shows good data distribution, because it reflects smaller deviations.
4. Return On Assets (ROA) has an average value of 2.1805 which is greater than the standard deviation of 1.2107. This shows good data distribution, because it reflects smaller deviations.

Classical Assumption Test Normality Test

The aim of the Normality Test is to test the independent variable data (X) and dependent variable data (Y) in the resulting regression equation, whether it is normally distributed or not normally distributed. Normality testing can be done using the One-Sample Kolmogrov-Smirnov Test (Ghozali, 2021).

Following are the results of the Normality Test:

Table 4.4 Normality Test Results

One-Sample Kolmogorov-Smirnov Test			
			Unstandardized Residual
N			20
Normal Parameters[a,b]	Mean		.0000000
	Std. Deviation		.63780223
Most Extreme Differences	Absolute		.120
	Positive		.114
	Negative		-.120
Test Statistic			.120
Asymp. Sig. (2-tailed)[c]			.200[d]
Monte Carlo Sig. (2-tailed)[e]	Sig.		.617
	99% Confidence Interval	Lower Bound	.604
		Upper Bound	.629

Source: Data processed by SPSS26

Based on table 4.4 above, it shows that the results of the normality test in the one sample K-S test using a sample of 20 data obtained overall results of dependent variable and independent variable data with significant asymp values. Sig (2-tailed) is 0.200. This shows that the residual values in this assessment are normally distributed because the significance value is above 0.05, so the regression model is appropriate to use because it meets the normality assumption.

Multicollinearity Test

The multicollinearity test is carried out to find out whether the independent variables are multicollinearity or not. The way to detect multicollinearity is to look at the tolerance value and the Variance Inflation Factor (VIF) value. These two measures show each independent variable which is explained by other independent variables, so multicollinearity does not occur if the tolerance value is > 0.1 and the VIF value is < 10.00 and vice versa. The results of the multicollinearity test are as follows:

Table 4.5 Multicollinearity Test Results

Coefficients[a]			
Model		Collinearity Statistics	
		Tolerance	VIF
	CAR	.836	1.196
	LDR	.240	4.158
	NPL	.242	4.136
a. Dependent Variable: ROA			

Source: Data processed by SPSS26

Based on Table 4.5 above, it explains that the values of all independent variables such as Capital Adequacy Ratio (CAR), Loan to Deposit Ratio (LDR), Non-Performing Loan (NPL) have a tolerance value greater than 0.1 and a VIF value less than 10, so based on the test results above the results do not occur multicollinearity so there is no correlation between the independent variables.

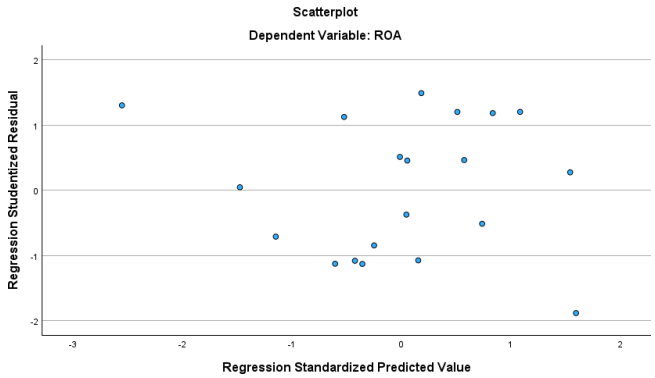
Heteroscedasticity Test

The Heteroscedasticity Test aims to test whether in the regression model there is an inequality of variance from the residuals of one observation to another, so it is called homoscedasticity and if it is different it is called heteroscedasticity (Ghozali, 2021). A good regression model is homoscedasticity or heteroscedasticity occurs. To test heteroscedasticity is to look at the pattern of dots on the regression scatterplot. The basis for heteroscedasticity decision making is:

1. If there is a certain pattern, such as points that form a certain regular pattern (wavy, widening then narrowing) then heteroscedasticity occurs.
2. If there is no clear pattern and the points spread above and below the number 0 on the Y axis, then heteroscedasticity does not occur.

The results of the Heteroscedasticity Test will be explained in Figure 4.1 below:

Picture 4.1
Hasil Uji Heteroskesdastisitas



Source: Data processed by SPSS26

Based on Figure 4.1 above, it shows the results of the heteroscedasticity test, which shows that the points appear to be spread above and below the number 0 on the Y axis, and do not form a certain regular pattern, which means they do not show heteroscedasticity in the regression model so that the research can be continued.

Auto Correlation Test

According to Ghozali (2021), autocorrelation aims to test whether in the linear regression model there is a correlation between confounding errors in period t and confounding errors in the previous t period. A good regression model is a model that avoids auto correlation. To determine whether there is autocorrelation in linear regression, it can be seen using the Durbin-Watson test (DW test). The results of data processing using the SPSS 26 program are as follows:

Table 4.6: Hasil Uji Autokorelasi

Model Summary[b]

Model		R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1		.820	.768	.59855	2.051

Source: Data processed by SPSS26

Based on table 4.6 above, it explains that the value of Durbin Watson is 2.051, where the value is 1.6763 (dU) < 2.051 < 4 – 1.6763 (dU). So it can be concluded that there are no symptoms of autocorrelation in this study.

Multiple Linear Regression Test

This research uses quantitative methods with multiple linear regression tools. Multiple linear regression analysis was carried out to test the influence of Capital Adequacy Ratio, Loan to Deposit Ratio, and Non-Performing Loans on Return On Assets. How much

the independent variable influences the dependent variable is calculated using multiple linear analysis equations. The following are the results of the multiple linear regression test:

Table 4.7: Multiple Linear Regression Test Results

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.208	1.615		.129	.899
	CAR	.018	.034	.141	.524	.608
	LDR	.006	.017	.160	.319	.753
	NPL	-.094	.221	-.211	-.423	.678
a. Dependent Variable: ROA						

Source: Data processed by SPSS26

Based on table 4.7 above, a multiple linear regression equation can be formed as follows:

Y = -0.208 + 0.018 + 0.006 – 0.094

Information

Y : *Return On Asset*

X1 : *Capital Adequacy Ratio*

X2 : *Loan to Deposit Ratio*

X3 : *Non Performing Loan*

Based on the Multiple Linear Regression it can be concluded that:

1. The Constant Coefficient value is 0.208 (positive). This shows that if the independent variables Capital Adequacy Ratio, Loan to Deposit Ratio, and Non-Performing Loan are 0 or fixed, then the value of the dependent variable, namely Return On Assets, is 0.208
2. The Capital Adequacy Ratio regression coefficient is 0.018 (positive). This shows that the Capital Adequacy Ratio has a unidirectional relationship with the Bank's Return On Assets. This means that if the Capital Adequacy Ratio increases by 1%, it will cause the Bank's Return On Assets to increase by 0.018 with the assumption that other variables are constant.
3. The Loan to Deposit Ratio regression coefficient is 0.006 (positive). This shows that the Loan to Deposit Ratio has a unidirectional relationship with the Bank's Return On Assets. This means that if the Capital Adequacy Ratio increases by 1%, it will cause the Bank's Return On Assets to increase by 0.006 with the assumption that other variables are constant.
4. The Non Performing Loan regression coefficient is -0.094 (negative). This shows that Non-Performing Loans have a relationship in the opposite direction to the Bank's Return On Assets. This means that if the Capital Adequacy Ratio increases by 1%, it will cause the Bank's Return On Assets to decrease by -0.094 with the assumption that other variables are constant.

Hypothesis Testing

Hypothesis testing was carried out using two tests, namely the t test and the F test. The t test was carried out to determine the influence of the Capital Adequacy Ratio, Loan to Deposit Ratio, and Non Performing Loan (Independent) variables on Return On Assets (Dependent) partially, while the F Test was used to determine the influence of the independent variables on the dependent variable simultaneously (together).

t Test (Partial)

Partial or Individual Test is to test how far the influence of an independent variable individually is in explaining variations in the dependent variable (Ghozali, 2021). The influence of each independent variable on the dependent variable can be seen from the size of the p-value. The basis for decision making is based on probability. If the p-value < 0.05 then H0 is rejected. If the p-value > 0.05 then H0 is accepted. Following are the results of the partial test:

Table 4.8 Partial Test Results (t Test)

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-5.653	3.712		-1.523	.147
	CAR	.317	.078	.583	4.047	<,001
	LDR	.027	.040	.182	.676	.509
	NPL	-1.125	.508	-.593	-2.214	.042
a. Dependent Variable: ROA						

Source: Processed by SPSS26 Based on Table 4.8 above, the results of the partial test (t test) are as follows:

1. The Capital Adequacy Ratio has a significance value of 0.000, this shows that the significance value of the Capital Adequacy Ratio is below 0.05, which means H0 is rejected or H1 is accepted, so the results show that the Capital Adequacy Ratio has a significant effect on Return On Assets of BUMN Banks
2. The Loan to Deposit Ratio has a significance value of 0.509, this shows that the significance value of the Loan to Deposit Ratio is above 0.05, which means that H0 is accepted or H2 is rejected, so the results show that the Loan to Deposit Ratio has no significant effect on Return On Assets of BUMN Banks
3. Non-Performing Loans have a significance value of 0.042, this shows that the significance value of Non-Performing Loans is below 0.05, which means H0 is rejected or H3 is accepted, so the results show that Non Performing Loans have a significant effect on Return On Assets of BUMN Banks

F Test (Simultaneous)

The Global Test is also called the simultaneous significance test or F Test. This test is intended to see the overall ability of the independent variables. The global test is intended to find out whether all independent variables have a regression coefficient equal to zero. The simultaneous test is shown by the anova table (Ghozali, 2021). To achieve the objectives of this research, the hypotheses to be tested are:

1. If Sig < 0.05 = H0 is rejected so H1 is accepted, meaning that there is a significant influence between all independent variables on the dependent variable.
2. If sig > 0.05 = H0 is accepted so H1 is rejected, meaning that there is no significant influence between all independent variables on the dependent variable. The following are the results of the simultaneous test.

Table 4.9 Simultaneous Test Results (F Test)

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22.785	4	5.696	15.900	<,001[b]
	Residual	5.016	14	.358		
	Total	27.801	18			
a. Dependent Variable: ROA						
b. Predictors: (Constant), LAG_Y, LDR, CAR, NPL						

Source: Processed by SPSS26

Based on table 4.9 above, it shows that simultaneously the independent variable has an influence on the dependent variable. This can be proven from the significance value of 0.000 < 0.05, thus H4 is accepted so it can be said that the Capital Adequacy Ratio, Loan to Deposit Ratio, Non-Performing Loans, simultaneously influence the Return On Assets of BUMN Banks.

Coefficient of Determination (R^2)

The Determination Test (R2) is used to determine the best level of accuracy in regression analysis, in this case indicated by the magnitude of the coefficient of determination. The coefficient of determination (R2) is used to determine the percentage influence

of the independent variable on the dependent variable. In this research, the coefficient of determination value used is the adjusted R square value (Algifari, 2019). To see how much influence the independent or independent variable has in explaining the dependent variable as a whole and its potential influence can be seen from the large value of the coefficient of determination (R2). The coefficient of determination (R2) measures how far the model's ability to explain variations in the dependent variable. The R2 value is between 0 and 1. If R2 is larger (closer to one), then the ability of the independent variable to the dependent variable is greater. Conversely, if R2 gets smaller (closer to zero) the independent variable relative to the dependent variable gets smaller. The following are the results of the coefficient of determination test:

Table 4.10 Coefficient of Determination Test Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.905[a]	.820	.768	.59855

Source: Processed by SPSS26

Based on Table 4.10 above, it can be seen that the R2 value is 0.768 or 76.8%. This shows that the independent variables, namely Capital Adequacy Ratio, Loan to Deposit Ratio, and Non-Performing Loans can be explained by the dependent variable, namely Return On Assets of 76.8%. Meanwhile, the remaining 23.2% can be explained by other variables that were not processed in this research.

IV. CONCLUSIONS

Conclusion

Based on research conducted with the aim of examining the factors that influence profitability in the banking sector on the Indonesian Stock Exchange, the conclusions of this research are as follows:

1. Capital Adequacy Ratio (CAR) has a significant effect on Return On Assets (ROA) in state-owned banks that go public in Indonesia.
2. Loan To Deposit Ratio (LDR) does not have a significant effect on Return On Assets (ROA) in state-owned banks that go public in Indonesia.
3. Non-Performing Loans (NPL) have a significant effect on Return On Assets (ROA) in state-owned banks that go public in Indonesia.
4. Capital Adequacy Ratio (CAR), Loan To Deposit Ratio (LDR), Non-Performing Loan (NPL) simultaneously have a significant effect on the dependent variable Return On Assets (ROA) in state-owned banks that go public in Indonesia.

Research Implications

The research implication for state-owned banks listed on the Indonesia Stock Exchange (BEI) for the 2019 - 2023 period is that they can review and analyze the historical performance of state-owned banks regarding Capital Adequacy Ratio (CAR), Loan to Deposit Ratio (LDR), Non-Performing Loans (NPL) and Return On Assets (ROA). Evaluation of financial performance consistency and trends from year to year can provide insight into the stability of long-term growth and can identify risks that may occur and opportunities that can be exploited. State-owned banks can identify areas that require more attention in capital risk management and more effective liquidity management. State-owned banks can identify factors that influence their profitability. In this case, state-owned banks can adjust their strategies, such as increasing operational efficiency, diversifying income, or improving credit processes, to increase their profitability.

Suggestion

1. For Investors

Investors who want to invest capital in companies should pay more attention to the factors that influence banking profitability, because knowing the bank's health level will make them more comfortable in investing funds.

2. For Companies

For company policy makers, performance can be improved by implementing risk management consistently and consistently and maintaining the ratios according to the provisions. Increasing profits can also be done by optimizing existing capital. Adding products is also important because it will increase the profit contribution from fee based income. Continue to maintain the health of the bank so that public confidence in the bank's performance is maintained.

3. For Researchers

For further researchers, they can expand the research by adding other variables, expanding the research sample such as adding other state-owned and private banks. Future researchers can also conduct research over a longer period of time to observe trends in the financial performance of state-owned banks from year to year.

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