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Profitability Determinants in Banking Companies Listed on the Indonesia Stock Exchange

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Abstract— *This study aims to analyze the effect of CAR, NPL, LDR, and BOPO on Banking Profitability using ROA in banking companies listed on the IDX for the 2016-2021 period. This research is a type of quantitative research using secondary data. Determination of the sample using a purposive sampling method with a total of 7 banking companies included in the BUKU IV category for 6 years and obtained 42 data, which was obtained through the official website of the Indonesia Stock Exchange (www.idx.co.id). The research method uses multiple linear regression analysis. The results of the study using the t-test obtained partial results that the CAR variable had a significant negative effect, while the NPL and LDR variables had a positive and insignificant effect, and the BOPO variable had a significant negative effect. Meanwhile, simultaneously the CAR, NPL, LDR, and BOPO variables have a significant effect on profitability.*

Keywords— *CAR, NPL, LDR, BOPO, ROA.*

I. INTRODUCTION

One of the important information in financial statements is information about profit. This information is considered important because it can explain how the company's performance during a period in the period that has passed. A bank's financial performance can be assessed from the bank's financial ratios, such as the ratio of Capital Adequacy Ratio (CAR), Non-Performing Loan (NPL), Loan to Deposit Ratio (LDR), and Operating Costs and Operating Income (BOPO).

The development of the CAR, NPL, LDR, and BOPO ratios of each banking company is presented in Figure 1.

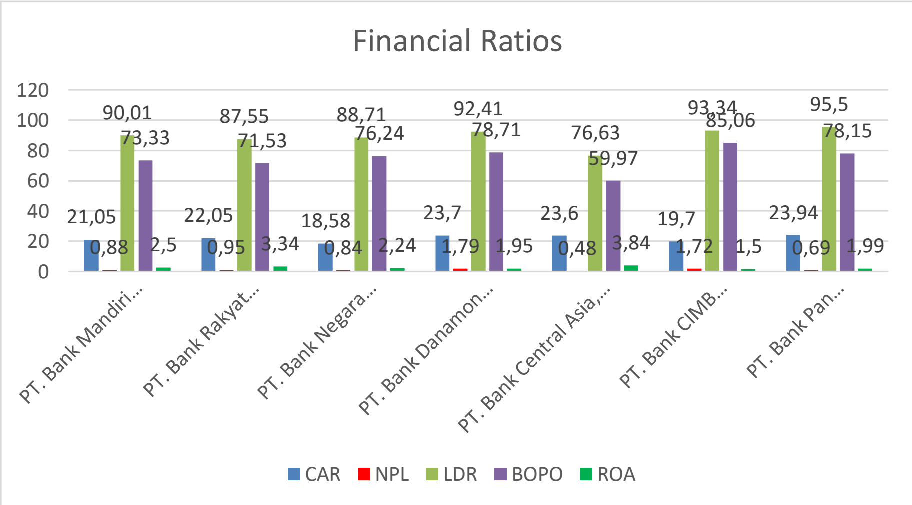

Fig. 1. Average Value of CAR, NPL, LDR, BOPO and ROA

Within a period of five years from 2016 to 2020, the highest average ROA in banking companies at 3.34% was owned by Bank Rakyat Indonesia (Persero), Tbk and the lowest value was owned by Bank CIMB Niaga, Tbk at 1.50%. During the period of the year, the profitability of banking companies fluctuated. However, the standard Return on Assets (ROA) of at least 1.5% is always achieved during the research period.

Several studies that examine the influence of financial performance on the profitability of banking companies listed on the Indonesia Stock Exchange have been carried out. Oktavianus (2016) and Dewi (2018) each conducted research on the effect of CAR on ROA and showed the results that CAR had a negative but not significant effect on Profitability (ROA). Furthermore, research conducted by Pamularsih (2015) on the effect of NPL on ROA, showed the results that NPL had no significant effect on ROA, while the results of research conducted by Dewi (2018) showed the result that the Non-Performing Loan (NPL) variable significantly affected the variable Return on Assets (ROA). Then, Oktavianus

(2016) conducted research on the effect of LDR on ROA which showed the results of a negative and significant effect of LDR on ROA, while the results of research from Suhandi (2019) showed that Loan to Deposit Ratio (LDR) had a significant effect on Return on Assets (ROA). Furthermore, research on the effect of BOPO on ROA (Dewi, 2018) shows the results that BOPO significantly affects Return on Assets (ROA).

Based on previous research which showed inconsistent results, the effect of financial performance of banking companies on profitability, researchers conducted further research to strengthen the results of previous studies. This study examines the effect of financial performance consisting of variables CAR, NPL, LDR, and BOPO on profitability with the ROA variable.

II. Literature Review

Financial performance is an analysis carried out to determine how a company carries out its activities accurately and correctly, using financial implementation rules (Gie, 2020). One of them is by compiling financial reports in accordance with standards and regulations such as Financial Accounting Standards (SAK) or General Accepted Accounting Principles (GAAP). The performance of a company is a picture of the financial health of a company, which is analyzed using financial analysis tools to find out how well the company's financial health is reflected in its performance during the period (Fahmi, 2017:37).

Financial performance is the result or achievement that has been achieved by the company's management in carrying out its function of managing company assets effectively for a certain period (Rudianto, 2013: 189). Financial performance is needed by companies to find out and evaluate the level of success of the company based on the financial activities that have been carried out.

The health or financial and non-financial position of a bank is for the benefit of all parties involved, including owners, bank administrators, state-owned banks and users of banking services (Darmawi, 2018:210). Those who know the state of a bank can use it to evaluate the bank's performance in applying the precautionary principle, compliance with regulations, and risk management. Bank performance is invaluable as a tool for evaluating bank operations and determining management planning and strategic analysis. Banking plays an important role in economic growth, so that if banking performance is good, the economy as a whole will also improve. In general, bank performance is a description of the bank's operational processes from financial aspects, product marketing, financing and distribution, technology utilization, and human resource management (Hery, 2020:112).

The bank's financial results are a description of the bank's financial position during a certain period, measured by the ratio of capital adequacy, liquidity and bank profitability, or commonly called measurement using CAMEL (Capital, Assets, Management, Liquidity, and Earning) analysis. Financial ratio analysis is an analytical method to determine the relationship between certain items in the balance sheet and income statement which is used to determine the level of performance of a bank. According to (Sujarweni, 2021:06), financial statement analysis is a process that helps to analyze and evaluate the company's financial position and the results of its activities during past and future periods. Financial statement analysis aims to evaluate the results achieved by a company and to evaluate future results. By looking at the financial statements, of course it can be seen whether the financial indicators increase every year.

Capital Adequacy Ratio (CAR) is a banking performance ratio that measures the adequacy of capital owned by banks (Kasmir, 2014:326). This ratio is used to measure the level of capital owned by the bank in order to work optimally. CAR is also related to loans provided by banks to their customers. In distributing credit, banks need capital or funds from several parties, namely the owners or shareholders of the bank, the government, the central bank, and domestic and foreign investors. Based on Bank Indonesia Regulation No.15/12/PBI/2013 concerning Minimum Capital Adequacy Requirements for Commercial Banks, a banking company is considered a healthy bank if its capital adequacy ratio is 8% or higher.

Non-Performing Loan (NPL) is a ratio that shows the bank's ability to manage non-performing loans provided by banks to depositors (Kuncoro and Suhardjono, 2011:426). Loan to Deposit Ratio (LDR) is a ratio that can be used to measure the composition of the loan limit to the amount of public funds and own capital (Kasmir, 2014:319). The Financial Services Authority (OJK) has set a limit on the value of Non-Performing Loans that must be owned by banks of no more than 5%.

Loan to Deposit Ratio describes the ability of banks to repay depositors' withdrawals by controlling credit as a source of liquidity. This type of percentage represents the amount of third party funds spent on the loan. Based on Bank Indonesia Regulation No.17/11/PBI/2015, regarding the Statutory Reserves for commercial banks in rupiah and foreign currency for conventional commercial banks, the level of liquidity in a bank is said to be “healthy” if the LDR value is between 85%-92%.

BOPO is the ratio of operating costs per operating income, which is a proxy for operational efficiency. BOPO is also known as efficiency ratio when efficiency is associated with cost management issues. Operational efficiency means that the costs of obtaining profits are smaller than the benefits of using assets (Kuncoro and Suhardjono, 2011:524). The level of BOPO efficiency that can be tolerated by banks in Indonesia ranges from 94% to 96%, this is in line with the provisions issued by Bank Indonesia Circular Letter No. 6/23/DPNP 31 May 2004 concerning the rating system for the soundness of commercial banks. Haryanto (2016) explains that banks that fail to improve their level of performance will lose their competitiveness in collecting public funds and using these funds in the form of venture capital.

Return on Assets, also known as ROA, is one of the profitability ratios used to measure a bank's ability to generate profits (profits) from overall asset management (Sujarweni, 2021:65). Return on Assets or returns on assets are used to

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measure how much net profit will be generated by the bank, from every rupiah of funds that have been embedded in the bank's total assets.

III. RESEARCH METHODS

The dependent variable in this study is bank profitability (ROA) which is denoted by Y. This ratio is used to measure the ability to obtain profits from the average total assets of banking companies listed on the Indonesia Stock Exchange (IDX). The variables suspected as the cause of the independent variables in this study are Capital Adequacy Ratio (CAR), Non-Performing Loans (NPL), Loan to Deposit Ratio (LDR), and Operating Costs and Operating Income (BOPO).

This study took a sample of banking companies listed in BUKU IV. BUKU Bank is an abbreviation of Commercial Bank for Business Activities, which is a group level of banking companies based on the amount of core capital owned. BUKU IV is a group of banking companies that have a core capital of at least Rp 30 trillion, (Kasmir, 2018:13). This research conducted classical assumption test, t test, f test and coefficient of determination to determine the effect of financial performance on profitability.

IV. FINDINGS RESEARCH

The t-test is used to identify whether the independent variable has a partial effect on the dependent variable. This t-test uses a significance value of 0.05 (α=5%).

TABLE 1. t-test

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	8.858	.901		9.827	.000		
	CAR	-.007	.021	-.021	-.344	.733	.927	1.079
	NPL	.061	.124	.034	.491	.626	.748	1.337
	LDR	.015	.007	.135	1.958	.058	.747	1.338
	BOPO	-.102	.007	-.991	-14.614	.000	.775	1.290
Dependent Variable: ROA								

Based on the results of the t-test in table 1, it is known that the results of data processing are described as follows:

1. *Partial Effect of Capital Adequacy Ratio (CAR) on Return on Assets (ROA)*

The CAR variable (X1) has a t significance value of 0.733 and a regression coefficient of -0.007. The resulting t significance value is greater than 0.05 (0.733 > 0.05). In addition, the statistical value of t-count is smaller than t-table (-0.344 < 2.02619). This states that the variable Capital Adequacy Ratio (CAR) has a negative and insignificant effect on Return on Assets (ROA).

CAR is the ratio of bank capital to Risk Weighted Assets, by showing a large CAR ratio, indicating a large bank capital as well. A higher CAR value indicates a better bank performance and bank profits will increase. In this case, CAR should have a positive effect on ROA. However, if the bank's capital is large but not maximally absorbed in the form of credit to the public, it causes the bank's profit (profitability) to be not optimal as well, so large capital will only have an effect on increasing profits if the capital can be utilized optimally by banks whose main activities are: distribute credit to the public.

The results of this study support research conducted by Dewi (2018) which gives the result that the Capital Adequacy Ratio (CAR) has an insignificant negative effect on Return on Assets (ROA). However, the results of this study are not in line with research conducted by (Grilseda & Riyadi, 2021), (Syamsiah et al., 2021), which gives the result that the Capital Adequacy Ratio (CAR) has an insignificant positive effect on Return on Assets (ROA).

2. *Partial Effect of Non-Performing Loans (NPL) on Return on Assets (ROA)*

The NPL variable (X2) has a t significance value of 0.626 and a regression coefficient of 0.061. The resulting t significance value is greater than 0.05 (0.626 > 0.05). In addition, the statistical value of t-count is smaller than t-table (0.491 < 2.02619). This states that the Non-Performing Loan (NPL) variable has a positive and insignificant effect on Return on Assets (ROA).

Non-Performing Loan (NPL) has no significant positive effect. This shows that even though banking companies have established an allowance for earning assets in accordance with the provisions of Bank Indonesia, but in their operations there are still substandard or non-performing loans, a PPAP (Allowance for Allowances for Earning Assets) will be formed with the hope that loans that have been disbursed and are experiencing congestion can back smoothly, so the bank will still have income. The sample banks used in this study all have NPLs below 5%, indicating that their NPLs do not exceed the maximum NPLs so that they do not cause a decrease in bank ROA and are still in the very healthy category. This means that the bank has succeeded in managing its non-performing loans.

The results of this study are in accordance with research conducted by Diyah which states that Non-Performing Loans (NPL) has an insignificant positive effect on Return on Assets (ROA).

3. *The effect of partial Loan to Deposit Ratio (LDR) on Return on Assets (ROA)*

The LDR variable (X3) has a t significance value of 0.058 and a regression coefficient of 0.015. The resulting t significance value is greater than 0.05, namely (0.058 0.05). In addition, the statistical value of t-count is smaller than t-table (1.958 < 2.02619). This states that the variable Loan to Deposit Ratio (LDR) has a positive and insignificant effect on Return on Assets (ROA).

This study shows that LDR has an insignificant effect, meaning that even though the bank provides large loans, it does not necessarily produce maximum profits, because credit is a risky matter, depending on the quality of the credit itself. Large profits may come from other bank income such as fee-based income which affects ROA so that the effect is not significant.

The results of this study do not support the results of research conducted by Syamsiah et al. (2021) and Muin

(2017) which gives the result that the Loan to Deposit Ratio (LDR) has a significant negative effect on Return on Assets (ROA). This study supports the results of research of Grilseda and Riyadi (2021) and Dewi (2018) which give the result that the Loan to Deposit Ratio (LDR) has a significant effect on Return on Assets (ROA).

4. *Partial Effect of BOPO on Return On Assets (ROA)*

The BOPO variable (X4) has a t significance value of 0.000 and a regression coefficient of -0.102. The resulting t significance value is less than 0.05 (0.000 < 0.05). In addition, the statistical value of t-count is smaller than t-table (-14.614 < 2.02619). This states that the BOPO variable has a negative and significant effect on Return on Assets (ROA).

The coefficient on the BOPO variable is negative indicating that every increase in the BOPO value will reduce the ROA value. This condition occurs because any increase in bank operating costs that are not accompanied by an increase in bank operating income will result in reduced profit before tax, which will ultimately reduce Return on Assets (ROA). If operational activities are carried out efficiently (in this case the value of the BOPO ratio is low), then the income generated will increase. In addition, the large BOPO ratio is also due to the high cost of funds raised and the low interest income from investment.

The results of this study support the results of research conducted by Dewi et al. (2015), which gives the result that operational costs and operating income (BOPO) have a negative effect on profitability.

The F test is used to identify whether the independent variable has a simultaneous effect on the dependent variable. This F statistic test uses a significance value of 0.05 (α = 5%).

TABLE 2. F-Test Result

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	32.692	4	8.173	60.891	.000[b]
	Residual	4.966	37	.134		
	Total	37.658	41			
Dependent Variable: ROA						

Based on the results of data processing in table 2, it can be seen that the significant value produced is smaller than 0.05 (0.000 <0.05). In addition, the calculated F statistic value is 60.891 which mean it is greater than the F table with a number of 2.62 (60.891 > 2.62). This shows that the variables Capital Adequacy Ratio (CAR), Non-Performing Loan (NPL), Loan to Deposit Ratio (LDR), and BOPO have a positive and significant effect together on Return on Assets (ROA).

The coefficient of determination (R^2) test is used to measure the model's ability to explain variations in the dependent variable. The value of the coefficient of determination is between 0 and 1.

TABLE 3. Determination Coefficient Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.932[a]	.868	.854	.36636	1.295
a. Predictors: (Constant), BOPO, CAR, NPL, LDR					
b. Dependent Variable: ROA					

Based on the test results in table 3, it can be seen that the R value is 0.932 or 93%, which means that the relationship between the independent variable and the dependent variable is included in the category of very strong correlation. Meanwhile, the value of R^2 and Adjusted R^2 is 0.868 or 86% which indicates that the dependent variable in this study can be influenced by the independent variable by 86% and the remaining 14% is influenced by other variables not taken into account in this study.

V. Conclusion

This study examines the effect of CAR, NPL, LDR, and BOPO on Profitability in Banking Companies Listed on the Indonesia Stock Exchange for the 2016-2021 Period. Based on the results of the study, the following conclusions can be drawn:

1. Capital Adequacy Ratio (CAR) in this study has a negative and insignificant effect on Profitability (ROA) in Banking Companies Listed on the Indonesia Stock Exchange in 2016-2021.
2. Non-Performing Loans (NPL) in this study have a positive and insignificant effect on Profitability (ROA) in Banking Companies Listed on the Indonesia Stock Exchange in 2016-2021.
3. Loan to Deposit Ratio (LDR) in this study has a positive and insignificant effect on Profitability (ROA) in Banking Companies Listed on the Indonesia Stock Exchange in 2016-2021.
4. Operating Costs and Operating Income (BOPO) in this study have a negative and significant effect on Profitability (ROA) in Banking Companies Listed on the Indonesia Stock Exchange in 2016-2021.
5. Simultaneously, the CAR, NPL, LDR, and BOPO variables have a significant effect on Return On Assets (ROA).

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