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Analysis of the influence of size, capital adequacy ratio, loan to deposit ratio, non performing loan on the profitability of commercial Banks Registered at OJK

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ABSTRACT

This study aims to analyze the effect of SIZE, Capital Adequacy Ratio (CAR), Loan to Deposit Ratio (LDR), Non-Performing Loans (NPL) on the profitability of national private commercial banks proxied by Return on Assets (ROA). The population in this study are foreign exchange national private commercial banks registered with the Financial Services Authority (OJK) for the 2018-2021 period. Sampling used a purposive sampling method with the criteria of national foreign exchange private commercial banks registered with OJK during the 2018-2021 period, national foreign private private public banks that have issued financial reports as of December 31 during the 2018-2021 period, as well as national foreign exchange private commercial banks that has complete data and information needed in research during the 2018-2021 period. The number of samples used in this study were 40 foreign exchange national private commercial banks. This study uses data obtained from the Bank's Annual Financial Report issued by each bank. The analysis technique used is multiple linear regression analysis and using a quantitative approach.From the simultaneous hypothesis test results (F test) it shows that SIZE, Capital Adequacy Ratio (CAR), Loan to Deposit Ratio (LDR), Non-Performing Loans (NPL) together have an effect on Return on Assets (ROA) with a significant value 0.000. Partially (t test) shows that SIZE, Capital Adequacy Ratio (CAR), Loan to Deposit Ratio (LDR) have no effect on Return on Assets (ROA), while Non Performing Loans (NPL) have an influence on Return on Assets (ROA).

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INTRODUCTION

Banks are the primary source of financing at the microeconomic level; as a result, it is crucial for banks to be able to maintain and even grow their level of profitability in order to boost the public's confidence in banking services. A nation's economic development efforts cannot be isolated from the banking sector because it plays as significant part in a nations's economic growth. Banks

provide the role of mediators or intermediary institutions in the financial system, collecting public fund via savings, demand deposits, and deposit products and redistributing the to those in need via credit (Siringoringo, 2012).

Companies that are able to maintain the continuity of their companies in the long term show good prospects in the future. Thus, the company must increase its profitability because profitability is the result of a series of policies and asset management. Profitability analysis is used to measure the level of business efficiency and profitability achieved by the bank concerned. The higher the level of profitability of a business entity, the survival of the business entity will be more guaranteed. Likewise for banking companies that must prioritize the level of profitability in maintaining the continuity of the company. Therefore, banks are requires to have good performance by increasing their profitability.

The first Covid-19 case in Indonesia was reported on March 2, 2020. According to the Financial Services Authority, this had an effect on Indonesian banks' declining earnings (OJK). By year's end, bank profits, according to the Financial Services Authority (OJK), will be down between 30% and 40% from the prior year. The bank earnings started to drop in the second quarter of 2020. (Fraser & Ormiston, 2008). Bank earnings before tax decreased from April to June 2020 by 19.8% compared to the same period last year. According to the Financial Services Authority, banking income has been modified since the first quarter of 2020. (OJK). The fall in bank revenues persisted into the third quarter of 2020. According to OJK data as of September 2020, bank profits decreased 27.6% from the previous year. The decrease in profit was bigger than the decrease in the position as of August 2020, which was 18.26%. Due to a decline in profitability from the previous month, the operating expenses to operating income ratio climbed to 86.18% in September 2020 from 85.09%. (Abate & Mesfin, 2019).

Moody's Investors Service lowered the sovereign bank's outlook from stable to negative for the next 12 to 18 months in reaction to the ongoing epidemic as reported by the International Rating Agency (LPI). Credit quality is declining, according to Moody's analytical team. In addition to possible interest rate reductions and restructuring assistance. Large-scale risks can be supported by funds with substantial capital (Oey & Al Hasny, 2016). Nobody has yet foreseen how the Covid-19 outbreak will affect the economy or the banking sector. On the other hand, there is still hope for progress. The government, Bank Indonesia (BI), the Financial Services Authority (OJK), and the Deposit Insurance Corporation (LPS) continued to give incentives to relax policies and use their authority to uphold stability and enhance bank performance from April 2020 to August 2020. (Dewi & Kirya, 2015). According to Bank Indonesia, the perception that Covid-19 transmission cases are rising in Indonesia, where businesspeople place a high value on profitability because the level of income used to gauge management effectiveness is derived from sales and investment income, is the cause of this decline in profitability (Darmawi, 2012).

The drop in a bank's profitability, which results in a decrease in the financial performance and performance of the bank, is one of the challenges that banks frequently face, according to Soares & Yunanto (2018). The performance of several banks demonstrates how each bank is capable of managing its finances in a unique way. Because many people believe that a bank with low levels of profitability will also perform poorly in managing its finances, and vice versa, a decline in bank performance will have an impact on the amount of public loyalty. In the meantime, according to Dietrich and Wanzenried (2011), the reduction in bank financial performance is the result of the supply of numerous loans to clients without equity or collateral used to counter the potential risks faced by banks. The Financial Services Authority (OJK) use profitability to evaluate a bank's soundness as a tool for supervisory authority in developing a plan and focusing its supervision on banks.

Financial report analysis activities include the calculation and interpretation of financial ratios that provide detailed information on the results achieved by a bank. Financial ratio analysis is very helpful for business people, both private and government in assessing the financial

condition of the banking industry. Ratio analysis assists business people in obtaining detailed information. So that business people get comparative data between banks and can more quickly find out developments and performance in each period. It is this banking condition that is interesting to study in order to find out how much influence financial ratios have on the level of bank profitability in Indonesia. So in this study it takes cases at Foreign Exchange National Private Commercial Banks from 2018 to 2021 by analyzing the factors that influence their profitability.

The level of profitability is measured using the Return on Assets (ROA) ratio because ROA is more focused on the ability of a bank to earn income in the bank's activities as a whole. In determining the soundness level of a bank, Bank Indonesia (BI) prioritizes ROA rather than ROE. This is because Bank Indonesia (BI) emphasizes the value of a bank's profitability as measured by assets whose funds mostly come from public deposits, so that ROA is more representative in measuring the level of profitability of a bank.

Various related studies conducted in Indonesia, including Arifa (2021), Ni Luh (2020), Kusmayadi (2018), Cekrezia (2015) identified a number of variables as determinants of profitability. However, the results of the research conducted are still different. Arifa (2021), Ni Luh (2020), Kusmayadi (2018) shows that Non Performing Loans (NPL), Loan to Deposit Ratio (LDR), Operating Expense Ratio (OER) and Net Interest Margin (NIM) have a significant influence on Return On Assets (ROA). Contrary to research by Cekrezia (2015) which shows that SIZE has no significant effect on Return On Assets (ROA). Research by Tambunan and Prabawani (2018), Maria & Rousilitas (2020) shows the result that SIZE has no effect on financial performance.

According to research conducted by (Abdurrohman, 2020), (Rembet & Baramuli, 2020), (Irfan et al., 2019) concludes that the Capital Adequacy Ratio (CAR) has a significant influence on Return On Assets (ROA), while the results of research from (Hanafia & Karim, 2020), (Pinasti & Mustikawati, 2018), (Soares & Yunanto, 2018) state that Capital Adequacy Ratio (CAR) has no effect on Return On Assets (ROA).

Differences in the results of the Loan to Deposit Ratio (LDR) study were also found in Dewi's research (2018), (Risalah et al., 2018), (Dewi et al., 2015) which states that the Loan to Deposit Ratio (LDR) has an effect on Return on Assets (ROA). Meanwhile, according to (Rembet & Baramuli, 2020), (Sudirgo & Stevani, 2019), (Permatasari, 2017) states that the Loan to Deposit Ratio (LDR) has no effect on Return On Assets (ROA).

Different results were shown from the research by (Dewi & Badjra, 2020), (Nuryanto et al., 2020), (Soares & Yunanto, 2018) show that Non-Performing Loans (NPL) have an effect on Return on Assets (ROA). Meanwhile, according to (M. Sofyan, 2019), (Permatasari, 2017), (Christatia & Grace, 2016) shows that Non-Performing Loans (NPL) have no effect on Return on Assets (ROA).

Based on the background above, the authors are interested in conducting research by taking the title "Analysis of the Influence of SIZE, Capital Adequacy Ratio, Loan to Deposit Ratio, Non-Performing Loans on the Profitability of Commercial Banks Registered at OJK".using a quantitative approach. Where the results of this study are expected to be useful for investors as a source of information and customer considerations in making decisions to invest and are useful for the bank as input material in order to maximize banking performance and company profitability.

RESEARCH METHOD

This study uses a quantitative approach. Quantitative research is one of sequential scientific research on parts and phenomena and their relationships. This research is a quantitative research because it focuses more on testing the theory by measuring research variables and analyzing data using statistical procedures. When viewed from the source of the data, this study uses a secondary data source, namely in the form of financial reports. The research data is taken from the publication of banking financial reports from the websites of each bank registered with the Financial Services Authority (OJK).

The population used for this study are commercial banks registered with the Financial

Services Authority (OJK) for the period 2018 – 2021 with a total of 43 foreign exchange national private public banks. The sampling technique used was purposive sampling technique. The criteria and characteristics in selecting the sample are; (1) Foreign exchange national private commercial banks registered with the OJK during the 2018 – 2021 period, (2) Foreign exchange national private commercial banks that have issued financial reports as of December 31 during the 2018 – 2021 period, (3) National foreign exchange private commercial banks that has complete data and information needed in research for 2018 – 2021. After adjusting to the selected criteria, a sample of 40 commercial banks was obtained.

The research data is secondary data, namely the data obtained from the results of publications that have been made by the company in the form of annual financial reports. The data analyzed is secondary data that is quantitative in nature taken from banking financial reports registered with the Financial Services Authority (OJK) for the period 2019 – 2021. The data was obtained from the website of each bank which was taken from the publication of banking financial reports. The data collection method in this study is a documentation technique by collecting, reviewing and recording secondary data in the form of banking financial reports registered with the Financial Services Authority (OJK) for the period 2019 – 2021. Then carry out purposive sampling with predetermined criteria, as well as make observations and Retrieval of data from banking financial reports.

RESULTS AND DISCUSSIONS

Descriptive analysis provides an overview or description of a data seen from the minimum, maximum, average value, and standard deviation. In describing research variables, the use of tables is used to provide support for descriptive analysis of research variables. In the previous chapter it was explained that the purpose of the study was to examine how SIZE, CAR, LDR and NPL as independent variables can affect ROA at national foreign exchange private commercial banks during the 2018-2021 period. The following is a description of the variables based on the processed output of SPSS 24.

Table 1. Descriptive Analysis

	N	Minimum	Maximum	Mean	Std. Deviation
SIZE	146	-.21	.79	.0760	.13334
CAR	146	12.59	97.98	25.9040	10.76281
LDR	146	12.35	195.55	87.8564	26.47524
NPL	146	.00	7.83	2,7333	1.71945
ROA	146	-1.26	5.70	1.2761	1.31996
Valin N (listwise)	146				

Source : SPSS 24

Table 1 above shows that during the 2018 – 2021 observation period the average SIZE of 146 banking samples is 0.0760. While the lowest percentage is -21% at Qatar National Bank (QNB) Indonesia Tbk in 2020 where the total assets are IDR 18,297,700,000.-. The highest percentage is 79% at the National Pension Savings Bank (BTPN) Tbk in 2019 where the total assets are Rp. 181,165,978,000, - The standard deviation of the SIZE variable is 0.13 which is greater than the average of 0.076, this indicates that the SIZE variable is heterogeneous (varies).

Table 1 above shows that during the period 2018 - 2021 the average CAR of 146 banking samples is 25.90%. The lowest percentage was 12.59% at Bank KB Bukopin Tbk in 2019, which shows that the capital requirement for the bank's capabilities is not good. The highest percentage is 97.98% for Bank of India Indonesia Tbk in 2021 which shows that the capital requirement for bank capabilities is getting better and healthier. The standard deviation of 10.76 is smaller than the average of 25.90 which indicates that the CAR variable is homogeneous.

Table 1 above shows that during the 2018 – 2021 observation period the average LDR of 146 banking samples was 87.86%. While the lowest percentage was 12.35% at Bank Capital Indonesia Tbk. The highest percentage was 195.55% at Bank Mizuho Indonesia Merdeka Tbk in 2018. The standard deviation of 26.47 is smaller than the average of 87.85 which indicates that the data is homogeneous.

Table 1 above shows that during the 2018 – 2021 observation period the average of 146 banking samples was 2.73. The lowest percentage is 0.00% for Bank Capital Indonesia Tbk in 2020-2021, while the highest percentage is 7.83% for Bank Sinarmas Tbk in 2021. The standard deviation of 1.72 is smaller than the average of 2.73 which indicates that the data is homogeneous.

The normality test is carried out to test whether the regression model, the independent variable and the dependent variable or both have a normal or abnormal distribution. The following are the results of the One Sample Kolmogorov-Smirnov Test using SPSS 24 in table 2

Table 2. Test Normality

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		146
Normal Parameters	Mean	.0000000
	Std. Deviation	1.17898612
Most. Extreme Difference	Absolute	.067
	Positive	.067
	Negative	-.043
Test Statistic		.067
Asymp. Sig. (2-tailed)		.200[c,d]
a. Test distribution is Normal		
b. Calculated from data		
c. Lilliefors Significance Correction		

Source : SPSS 24

Table 2 shows a significant value of 0.200 greater than 0.05, meaning that the data is normally distributed. The multicollinearity test was carried out to find out whether the regression model found a correlation between the independent variables, to produce good results in the regression model, that is, there was no correlation. Following are the results of the multicollinearity test using SPSS 24 in table 3.

Table 3. Multicollinearity Test

Coefficients			
	Model	Colinearity Statistic	
		Tolerance	VIF
1	(Constant)		
	SIZE	.957	1.045
	CAR	.982	1.018
	LDR	.933	1.072
	NPL	.932	1.073

Source : SPSS 24

Based on table 3 shows the tolerance value of the five independent variables is more than 0.10 and the VIF value is less than 10, meaning that the data is free from multicollinearity. The heteroscedasticity test is used to determine whether in the regression model there is an unequal variance of the residuals between one observation and another. If the residual value between observations remains the same, it is called homoscedasticity, but when it is different it is called heteroscedasticity. Following are the results of the heteroscedasticity test using SPSS 24 as seen from the glacier test which is to prove validly whether the data is truly free of heteroscedasticity.

Table 4. Heteroscedasticity Test

Coeffients		
	Model	Sig.
1	(Constant)	.000
	SIZE	.825
	CAR	.008
	LDR	.003
	NPL	.000

Source : SPSS 24

Based on table 4, it shows that the significant value of the independent variable (SIZE) is more than 0.05 which indicates that the data is free from heteroscedasticity. Meanwhile, the CAR, LDR, and NPL variables show a significant value of less than 0.05, which means that there is heteroscedasticity.

The autocorrelation test is used to test whether the linear regression model has a correlation between the t-period confounding errors and the t-1 (previous) period confounding errors. Following are the results of the autocorrelation test using SPSS 24 as seen from the Summary Model (b) presented as follows:

Table 5. Autocorrelation Test

Runs Test	
	Unstandardized Residual
Test Value	.09862
Cases < Test Value	73
Cases >= Tes Value	73
Total Cases	146
Number of Runs	38
Z	5.979
Asymp. Sig. (2-tailed)	.000

Source : SPSS 24

Table 5 shows a significant value of 0.00, less than 0.05, meaning that there is autocorrelation or residual data that is not random or systematic. Multiple linear regression analysis is used to determine the effect of SIZE, CAR, LDR and NPL on Profitability. From the results of multiple linear regression tests, the regression equation is obtained as follows :

Table 6. Multiple Linear Regression Analysis

Coeficients				
Model		Unstandardized Coefficients		Standardized Coefficients
		B	Std. Error	Beta
1	(Constant)	2.366	.523	
	SIZE	.457	.761	.046
	CAR	.013	.009	.103
	LDR	-.006	.004	-.128
	NPL	-.327	.060	-.426

Source : SPSS 24

$$ROA : 2.366 + 0.457\ X1 + 0.013\ X2 - 0.006\ X3 - 0.327\ X4 + e$$

The F test is used to determine whether a regression model is fit or not. The F test shows whether all the included independent variables affect the dependent variable. The statistical hypothesis model is ; (H0) Taken together, SIZE, CAR, LDR and NPL have no effect on ROA. (H1)Taken together, SIZE, CAR, LDR and NPL have an effect on ROA. Testing this hypothesis uses the following decision-making criteria: H0 is accepted if the significant level is > = 0.05, H0 isn't accepted if the significant level is ≤ = 0.05. Following are the results of the F test using SPSS 24 seen in ANOVA presented as follows:

Table 7. F test

Model		F	Sig.
1	Regression	8.934	0.000[b]
	Residual		
	Total		

Source : SPSS 24

Based on Table 7, it shows a significant value of 0.00, which is less than 0.05, which means H0 is rejected. This means that together, SIZE, CAR, LDR and NPL affect ROA.

Table 8. Adjusted R^2

Model Summary			
Model	R	R Square	Adjusted R Square
1	.450[b]	.202	.180

Source : SPSS 24

Based on table 8 it shows that the value of the coefficient of determination or R2 is 0.180 or 18%. This means that the independent variable in explaining the dependent variable is 18% and the remaining 82% is explained by other factors that are not present in this study.

Table 9. t Test

Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.366	.523		4.521	.000
SIZE	.457	.761	.251	.601	.549
CAR	.013	.009	.011	1.363	.175
LDR	-.006	.004	-.143	-1.642	.103
NPL	-.327	.060	-.159	-5.463	.000

Source : SPSS 24

Based on table 9 shows that : (1) The SIZE results show that the significant value for the SIZE variable is 0.549 and the coefficient value (B) is 0.457 where the significant value of 0.549 is greater than 0.05 which means H0 is accepted. So it can be concluded that SIZE has no effect on ROA. (2) The CAR results show that the significant value for the CAR variable is 0.175 and the coefficient value (B) is 0.013 where the significant value of 0.175 is greater than 0.05 which means H0 is accepted. So it is concluded that CAR has no effect on ROA. (3) The LDR results show that the significant value for the LDR variable is 0.103 and the coefficient value (B) is -0.006. where the significant value of 0.103 is greater than 0.05, which means H0 is accepted. So it is concluded that LDR has no effect on ROA. (4) The NPL results show that the significant value for the NPL variable is 0.000 and the coefficient value (B) is -0.327 where the significant value of 0.000 is smaller than 0.05 which means H0 is rejected. So it can be concluded that NPL has an effect on ROA.

CONCLUSION

The purpose of making this research is to find out the influence that arises from SIZE, Capital Adequacy Ratio, Loan to Deposit Ratio and Non-Performing Loans on Profitability (ROA). Hypothesis testing using SPSS 24 statistical tools with multiple regression analysis method. The sample in this research is 40 foreign exchange national private commercial banks registered with the OJK during the 2018-2021 period. The results of simultaneous hypothesis testing (Test F) show that the F value is 8,934 with a significance level less than 0.05 which indicates that all independent variables consisting of SIZE, CAR, LDR, NPL simultaneously affect the dependent variable, namely Return on Assets (ROA)). Based on the results of the t test it can be concluded as follows: (1) SIZE has no effect on Return on Assets (ROA). This can be seen from the significant value for

the SIZE variable of 0.549 and the coefficient value (B) of 0.457 where the significant value of 0.549 is greater than 0.05, which means H0 is accepted. So it can be concluded that SIZE has no effect on ROA. (2) Capital Adequacy Ratio (CAR) has no effect on Return on Assets (ROA). This can be seen from the significant value for the CAR variable of 0.175 and the coefficient value (B) of 0.013 where the significant value of 0.175 is greater than 0.05, which means H0 is accepted. So it is concluded that CAR has no effect on ROA. (3) Loan to Deposit Ratio (LDR) has no effect on Return on Assets (ROA). This can be seen from the significant value for the LDR variable of 0.103 and the coefficient value (B) of -0.006. where the significant value of 0.103 is greater than 0.05, which means H0 is accepted. So it is concluded that LDR has no effect on ROA. (4) Non Performing Loans (NPL) have an effect on Return on Assets (ROA). This can be seen from the significant value for the NPL variable of 0.000 and the coefficient value (B) of -0.327 where the significant value of 0.000 is smaller than 0.05, which means H0 is rejected. So it can be concluded that NPL has an effect on ROA. In addition, there are also limitations in this study, namely based on the results of the heteroscedasticity test indicating that the SIZE variable is independent of heteroscedasticity which is indicated by a significant value of more than 0.05, while the CAR, LDR, NPL variables indicate that heteroscedasticity occurs which is indicated by a significant value of less than 0.05. and based on the results of the autocorrelation test stated that there was an autocorrelation indicated by a significant value less than 0.05. Given the limitations of this study, the researchers provide suggestions for further research that is expected to use other measurements to analyze the effect of profitability so as not to be constrained.

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