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Effect of Earning Asset Quality and Non-Performing Loans on Capital Adequacy Level

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Abstract

This study aims to examine and analyze the effect of the quality of productive assets and non-performing loans on the level of capital adequacy. This research uses quantitative methods with an associative form. The research population is all banking companies listed on the Indonesia Stock Exchange for the period 2012-2019. Determination of the sample using purposive sampling technique focused on criteria for state-owned banks. Four companies were selected with a total sample size of 32 pieces analyzed using the multiple regression analysis models. The results showed that the variable of earning asset quality had a negative and significant effect on the level of capital adequacy of state-owned banks and non-performing loans had a negative and insignificant impact on the level of capital adequacy of state-owned banks. According to internal and external banking conditions, banking management manages to earn assets prudently by mitigating risks, as reflected in the significant growth in earnings values during the study period. Risk mitigation under operational principles is reflected in the NPL's small amount during the study period, indicating that the management has complied with the NPL value threshold required by the regulator. Professionally managed bank productive assets will lead to maximum profits and reduce unnecessary burdens so that the combination of the two will maintain the bank's capital adequacy level.

Keywords: Earning Asset Quality; Non-Performing Loans; Capital Adequacy Level

1. Introduction

The impact of Covid-19 affects various industrial sectors and is predicted to last a long time (Djalante et al., 2020). One of the industries affected by this pandemic condition is banking because of the increased risk of bad credit. The risk of bad credit will impact lowering bank profits, which is influenced by an increase in provision costs. Bank BTN is the company with the worst decline rate, which is at 92.5% (Katadata, 2019). In the face of declining banking performance conditions, Bank Indonesia (BI) provided a stimulus to mitigate risks, such as issuing policies to maintain price stability so that financial market processes and monetary policy transmission effectiveness can be guaranteed. Measures taken include (cutting interest rates, purchasing securities, intervening in the money market, preventing capital flows, and establishing swap arrangements) (Suksmonohadi & Indira, 2020).

The capital adequacy ratio is one of the most critical indicators in banking that provides an overview of bank performance and stability, the use of the minimum capital adequacy ratio leads to increased strength and efficiency of the financial system by reducing the possibility of bank insolvency (Bateni et al., 2015). In the regulation of the financial services authority number 11 / POJK.03 / 2016 article 2 paragraph 2, it is explained that what is meant by the Capital Adequacy Ratio is the ratio between bank capital and Risk-Weighted Assets. The adequacy of bank capital is highly dependent on the quality of earning assets (Siamat, 2005). The quality of productive assets is the payment of principal or loan principal and interest installments by customers—the possible return of funds invested in securities or often called collectability. According to Kasmir (2014), earning asset quality is the ratio between making assets formed and the allowance for classified earning assets established by the bank. Banks with large capital but the quality of their productive assets will implicitly write off money from banks.

In Indonesia, the quality of productive assets is assessed based on addiction's smoothness (Putri & Budiartha, 2020). The

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primary key to bank income comes from productive assets, so that good banking management is essential to maintain the quality of productive assets (Sunarto & Supriati, 2017). A high number of non-performing loans indicates a lower rate of earning assets, whereas a lower number of non-performing loans indicates a higher earning asset rate (Bace, 2016). High Non-Performing Loans (NPL) also describe that credit management at banks that is not optimal can potentially increase the bank's minimum capital adequacy level (Mardi & Faradila, 2016).

State-owned enterprises (BUMN) banks are an essential pillar of the national economy that plays a role in encouraging economic growth through positive contributions to community economic activities. As a business entity owned by the government, state-owned banks act as agents of value creators and agents of development; even in conditions of the Covid-19 pandemic like this, banks play a role in maintaining national economic stability and playing a role in restoring the national economy (Kacaribu, 2020). On the other hand, state-owned banks also have a big responsibility to carry out asset management to remain healthy professionally. The Capital Adequacy Ratio, which always increases from period to period, is a beneficial bank characteristic (Cahyono & Anggraeni, 2015). therefore, this research aims to analyze the significance of earning asset quality and non-performing loans on Capital Adequacy Ratio both simultaneously and partially to state-owned banks for the period 2012-2019. This study's results are expected to be useful for making policies related to fulfilling the capital adequacy of state-owned banks.

Earning assets are investments made to achieve the expected income/profit (Susila, 2017). If there are constraints on productive assets, it will impact decreasing profits and decreasing the level of capital adequacy. This is because a decrease in profit will increase expenses and will slowly erode the company's capital. Research (Chatarine & Lestari, 2014) found that the quality of earning assets hurts the level of capital adequacy.

H1: Earning Asset Quality has a negative effect on the level of capital adequacy.

A large number of bad loans causes the burden of allowance for accounts receivable write-offs and other expenses needed to restructure credit from the company to be large to erode profits and reduce the level of capital adequacy of the bank (Riyadi, Iqbal and Lauren, 2015). Research conducted (Cahyono & Anggraeni, 2015) found that non-performing loans have a negative effect on the level of capital adequacy.

H2: Non-Performing Loans have a negative effect on the level of capital adequacy.

3. Research Design and Method

This research is quantitative research with an associative method to determine the relationship between two or more variables and the correlation between the variables studied (Kuncoro, 2009). This study uses quantitative data sourced from financial reports for the 2012-2019 period with documentation techniques. The population in this study are banking companies listed on the Indonesian stock exchange as of 2019, and the sampling technique uses the purposive sampling method with detailed criteria in table 1:

Table 1.

Sample Result of Determination

Nomor	Deskripsi	Jumlah
1	Perusahaan perbankan yang terdaftar di bei periode penelitian 2012-2019	48
2	Perusahaan perbankan yang tidak menerbitkan laporan keuangan secara reguler dari periode 2012-2019	(3)
3	Perusahaan perbankan yang kepemilikan modalnya tidak dimiliki oleh negara	(41)
Jumlah sampel pengamaatan selama 8 periode (4 perusahaan x 8 periode)		32

The research analysis model used a multiple regression analysis models with the classification assumption test stages, the coefficient of determination test, and the significance test. This study's variables consisted of 2 independent variables: the quality of productive assets and non-performing loans, and one dependent variable, namely the level of capital adequacy.

The ratio of the assessment to the quality of earning assets is seen from the percentage of assets classified as total earning assets (Murdiati & Purwanto, 2015.

$$Earning\ Asset\ Quality\ Ratio = \frac{Classified\ Earning\ Assets}{Total\ Earning\ Assets}$$

Non-Performing Loans (NPL) show bank management's ability to manage non-performing loans from the total loans extended by the bank. NPL measurement uses a formula (Cahyono & Anggraeni, 2015).

$$Non - Performing\ Loans = \frac{Non\ Performing\ Credit}{Total\ Credit}\ x\ 100\%$$

The use of Risk-Weighted Assets refers to the regulation of Indonesian bank No.15 / 12 / PBI / 2013 concerning KPMM, which consists of ATMR for credit risk, ATMR for operational risk, and ATMR for market risk. Capital Adequacy Ratio is a bank's ability to maintain sufficient capital and bank management's ability to identify, measure, supervise, and control risks that arise to affect bank capital. Measurement of the level of capital adequacy using a formula (Cahyono & Anggraeni, 2015).

$$CAR = \frac{Capital}{ATMR}\ x\ 100\%$$

4. Results and Discussion

Statistical Analysis

The normality test is a test to determine whether the residual value is normally distributed or not. If the residual value is usually distributed, the study's data can test the hypothesis model. The test results show that the probability value (sig.) Obtained is 0.618. The probability value in the Kolmogorov-Smirnov test is still more significant than the 5% error rate (0.05), so it can be concluded that the regression model is usually distributed. Figure 1 confirms that the regression model obtained usually is distributed, where the points spread around the diagonal line and the direction of the distribution follows the diagonal line's approach.

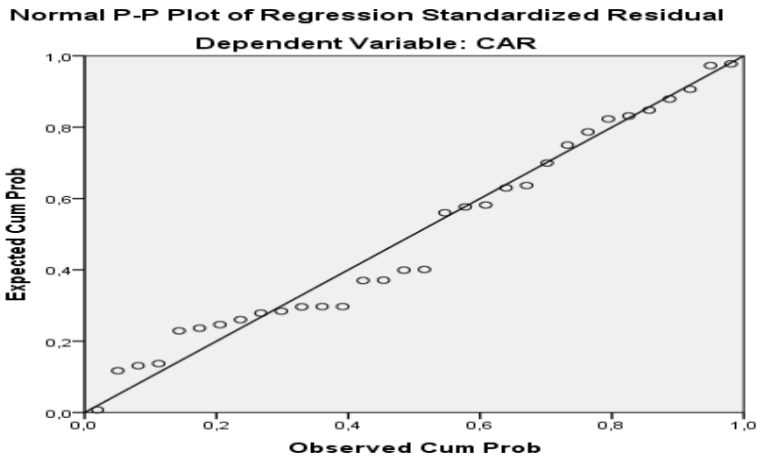

Figure 1. Normality test results

The multicollinearity test aims to see the correlation between the independent variables in a multiple linear regression model. If there is a high correlation between the independent variables, then the relationship between the independent and dependent variables will be disturbed. To test for multicollinearity, it can be seen from the tolerance value and the VIF (Variance Inflation Factor) value. If the VIF value is <10 and the tolerance value> 0.10 indicates no multicollinearity symptoms. This study's multicollinearity test results suggest that all independent variables have a VIF value less than ten and a tolerance value greater than 0.10. This shows that there are no multicollinearity symptoms in the regression equation model so that the data can be used in this study.

The test heteroscedasticity aims to test the inequality of variants from the residuals of one observation to another. The correlation coefficient of each independent variable is significant at an error level of 5% (0.05), indicating heteroscedasticity. The results of the heteroskedastic test in this study suggest that the sig level (significance) of the two research variables (Earning Asset Quality and Non-Performing Loans) shows a value above 5% (0.05). These results indicate the absence of heteroscedasticity symptoms with a significance value of 0.746 and 0.945, respectively. Figure 2 confirms that the regression model obtained does not occur heteroscedasticity. The data is spread out on the Y-axis and does not form a clear pattern in distributing the data.

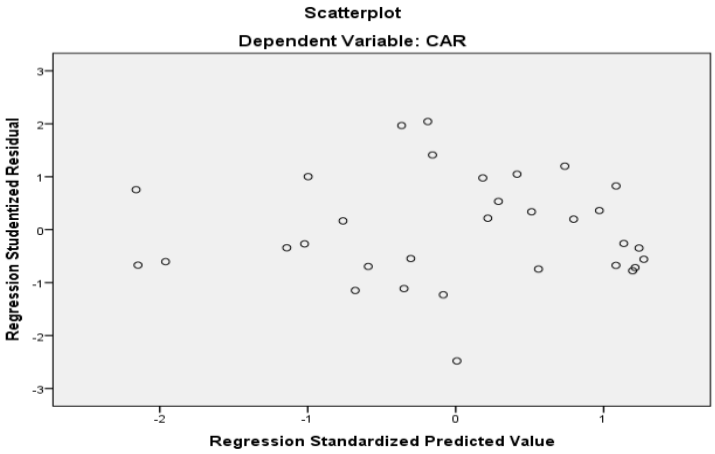

Figure 2. Heteroscedasticity test results

The autocorrelation test aims to test whether there is a correlation between confounding error in period t and confounding error in period t-1 (previous) in the linear regression model. Autocorrelation testing was performed using the Durbin-Watson method. If the resulting Durbin-Watson value is in the range of 1.55 - 2.46, it can be stated that the model used is free from autocorrelation disorders. Based on the test results, the Durbin-Watson value is 1.556. These results indicate that the model used is free from autocorrelation disorders because it is between 1.55-2.46. After the classical assumption test results are carried out, and the overall results show that the regression model meets the classical assumptions, the next step is to evaluate and interpret the multiple regression model.

Table 2.

Linear Regression Testing

	β	Std. Error	Beta	T	Sig	Info
(Constant)	19,307	1,236		15,626	,000	
PAQ	-,027	,011	-,444	-2,559	,016	Support
NPL	-,065	,128	-,089	-,513	,612	Not Support

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Table 3.

Determination Coefficient Test (R2)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,483[a]	,233	,180	1,52288

The coefficient of determination is used to determine the independent variable's ability to explain the dependent variable. The coefficient of the decision can be seen in R Square and expressed as a percentage. Table 3 shows the R Square value of 0.233. This indicates that the two independent variables in this study had a 23.3% influence on the dependent variable and the remaining 76.7% were influenced by other variables not studied.

The F test is used to determine whether the independent variables significantly affect the dependent variable. The degree of confidence used is 0.05. With the provisions, if the significance of the F count <0.05, the proposed hypothesis can be accepted. In table 4, the calculated F value of 4.412 with a level (sig.) Of 0.021 or a significance value of 0.021 is smaller than the probability value of 0.05, so Hypothesis 3 (H3) is accepted that there is a significant influence between the quality of earning assets and non-performing loans on the level of capital adequacy.

Table 4.

F-Test

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	20,462	2	10,231	4,412	,021[b]
	Residual	67,255	29	2,319		
	Total	87,718	31			

A partial test is used to determine whether the independent variable partially has a significant effect on the dependent variable. The degree of significance used is 0.05. The test is carried out using the t-test by looking at the significance value of t count. If the significance value of t count <0.05, it can be said that the independent variable influences the dependent variable. The variable of Earning Asset Quality has a significance level of 0.016, which is less than 0.05. The value of β, which has a value of -0.027, shows that the effect is negative on the dependent variable. The test results accept the hypothesis that the quality of earning assets has a negative and significant impact on capital adequacy. The non-performing loan variable has a significant level of 0.612, which is greater than 0.05. The value of β, which has a value of -0.065, shows that the effect is negative on the dependent variable. The test results accept the hypothesis that non-performing loans have a negative but insignificant impact on the level of capital adequacy.

Discussion

The quality of productive assets, which has a negative and significant effect on the level of capital adequacy, explains that if the value of earning assets increases, the cost of capital adequacy will decrease, and vice versa. These results imply that the quality of well-managed productive assets will increase the company's capital adequacy value. Most of the bank's capital is obtained from third party deposits, then channeled back to the public. In this case, the bank has carried out its intermediary function to profit from the difference between the deposit rate and the credit interest rate. Suppose credit is disbursed to the public, which is classified as productive assets and has the potential not to generate income or cause losses. In that case, this will increase the banking sector's operating expenses and financial costs, thereby eroding profits. The decline in the value of profit will undoubtedly erode the value of the bank's capital adequacy if it lasts for a long time. If the value of classified earning assets is smaller than the total assets, the banking gaining assets' quality will be better. The better quality of productive assets will positively contribute to reducing operating expenses that do not benefit the bank to maximize profits. Maximum profit growth will provide sufficient working capital for the bank to continue growing so that capital adequacy can be maintained. Based on the observed sample financial report data, it is reflected that the majority of the samples in the observation period obtained significant profit gains. Each year's growth in earnings value indicates that the observed sample companies have successfully implemented effective asset management policies and carried out operations by mitigating the risks that arise. This certainly has an impact on profit growth and the maintenance of capital adequacy. Research conducted by (Kemal 2011) states that financial ratios such as profitability, productive assets, liquidity, and several other financial ratios affect a bank's health, shown by the ability to maintain its capital. Research (Fitranto & Mawardi, 2006) states that if a bank continues to experience losses due to the low return rate on productive assets, its capital will be eroded little by little.

Non-performing loans have a negative but insignificant effect on capital adequacy, meaning that when the value of non-performing loans increases. This will result in a decrease in the level of capital adequacy. The greater the NPL ratio, the worse the financing quality, which increases the number of non-performing loans; thus, the bank will experience a significant loss. Following what was stated (Pratiwi et al., 2019), banks' losses from problem loans will reduce the amount of their capital. Furthermore, the decrease in their wealth will decrease the percentage of the Capital Adequacy Ratio. The decline in the Capital Adequacy Ratio's value was due to the banking system's financial mechanism having to bear an enormous burden on provision for impairment losses provided by banks. In this case, third-party funds are channeled to debtors. This will undoubtedly result in an eroded profit; then, the bank must also pay for the replacement of deposits that have been conducted but have stalled, which will also erode bank capital. However, the insignificant decrease indicates that the changes in NPLs did not play a significant role in forming the Capital Adequacy Ratio for the study period 2012-2019. This is due to government policies that prevent lousy credit risk, such as providing a maximum credit limit (BMPK) by setting a full non-performing loan of 5%. The formation of allowance for earning assets and credit write-offs is only an attempt to write-off records to continue collection efforts. Then in the observation period, the sample of companies that were observed on average showed an NPL value of not more than 3% and still far from the limit value required by the government. It can be concluded that banks have carried out prudent credit management by mitigating risks as required by regulators so that the possibility of non-performing loans can be minimized. This study's results are in line with the research results (Sorongan, 2020), which states that NPL has a negative and insignificant effect on the Capital Adequacy Ratio.

5. Conclusions

The quality of productive assets, which has a negative and significant effect on capital adequacy, indicates that bank management must be careful in managing the company's productive assets. As business entities operating in the financial services industry, banks are prone to business risks if their management is unprofessional and does not consider all aspects of the value of benefits. Banking productive assets that are professionally managed can provide maximum profit or benefit through a return rate that can reduce operating costs, thereby providing services to customers and maximizing profits for the bank. On the other hand, if the earning assets are not managed properly, they will potentially not bring benefits and even give losses to the bank, and this should be the concern of banking management. The results showed that non-performing loans had a negative but insignificant effect on capital adequacy, indicating that in banking operational activities. The bank has a risk of uncollectible from the financing made; however, management has a duty and function to minimize risk by mitigating risk by considering internal and external conditions. External conditions are related to the decline in the community's purchasing power and economic capacity, affected by global economic conditions and the Covid-19 outbreak. The management is obliged to always comply with the appropriate directions. The control of banking operations can be adequately managed to keep the NPL value low, and the bank's operational sustainability can continue effectively and efficiently.

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