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ANALYSIS OF THE IMPACT OF BAD DEBTS AND LENDING ON THE PROFITABILITY OF STATE-OWNED BANKS

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Abstract: *Conventional banking including Persero Bank has its main income from interest on loans distributed to the public. This research aims to prove the impact between credit congestion and credit distribution with profitability at Persero Bank in the 2014-2023 period. The data source for this research are from data presented by Financial Service Authority and annual financial reports of each bank. The analysis method in this research uses multiple linear regression analysis method. The result of this research prove that partially credit congestion has a negative and significant effect on the profitability of Persero Bank for the period 2014-2023. Meanwhile credit distribution partially hasn't effect on profitability of Persero Bank for the period 2014-2023. Simultaneously, credit congestion and credit distribution have an impact on profitability of Persero Bank.*

Keywords: *Credit Congestion, Credit Distribution, Profitability.*

Abstrak: Bank konvensional termasuk bank persero memiliki pendapatan utama yang bersumber dari bunga pinjaman yang disalurkan kepada masyarakat. Penelitian ini bertujuan untuk membuktikan dampak antara kredit macet dan penyaluran kredit dengan profitabilitas pada Bank Persero pada periode 2014-2023. Sumber data penelitian ini berasal dari data yang disajikan Otoritas Jasa Keuangan (OJK) dan laporan keuangan tahunan masing-masing perbankan. Metode analisis dalam penelitian ini menggunakan metode analisis regresi linier berganda. Hasil penelitian menunjukkan bahwa secara parsial kredit macet memiliki pengaruh negatif dan signifikan terhadap profitabilitas Bank Persero periode 2014-2023. Sedangkan penyaluran kredit secara parsial tidak memiliki pengaruh terhadap profitabilitas Bank Persero periode 2014-2023. Secara simultan, kredit macet dan penyaluran kredit berdampak terhadap profitabilitas Bank Persero.

Kata Kunci: Kredit Macet, Penyaluran Kredit, Profitabilitas.

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1. INTRODUCTION

Banks are financial entities that play an important role in society as individuals, businesses and even countries. It can be said so because banks can affect the economy on a micro and macro level. Conventional commercial banks carry out three main business activities, namely general banking services, collecting public funds, and channeling funds to the public (Wangsawidjaja Z., 2020). Conventional banks mostly depend on interest on loans distributed to debtor customers as the main income. Therefore, banks must maintain their financial performance from risks that can cause losses through the Return On Asset (ROA) ratio level. According to the Financial Services Authority, the risks include credit, market, operational, legal, reputation, strategic, and compliance risks.

Credit risk according to the Financial Services Authority Regulation Number 18/POJK.03/2016 concerning the Implementation of Risk Management for Commercial Banks, is the risk of loss because other parties' obligations to the bank are not fulfilled. Credit risk is shown in the non-performing loan ratio which measures the ratio of non-performing loans to total loans. The ratio of non-performing loans can be proxied by Non Performing Loan or NPL, an increase in NPL will cause the cost of provisioning for productive assets and other operating costs to increase which in turn has an impact on reducing the financial performance of banks (Korompis et al., 2020).

Liquidity risk is the risk that arises because the bank cannot pay its maturing obligations from cash flow and liquid assets that can be collateralized without disrupting the bank's operations and financial health. Liquidity risk is shown in the lending ratio which measures the ratio between total loans granted and total third party funds. The lending ratio can be proxied by the Loan to Deposit Ratio or LDR, an increase in LDR is a signal that the bank is channeling a lot of credit which will improve financial performance (Maulana et. al., 2023).

Table 1. Profitability Ratio (ROA) of Persero Bank 2014-2023

Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
BRI	4.73%	4.19%	3.84%	3.69%	3.68%	3.50%	1.98%	2.72%	3.76%	3.93%
Mandiri	3.57%	3.15%	1.95%	2.72%	3.17%	3.03%	1.64%	2.53%	3.30%	4.03%
BNI	3.49%	2.64%	2.69%	2.75%	2.78%	2.42%	0.54%	1.43%	2.46%	2.60%
BTN	1.14%	1.61%	1.76%	1.71%	1.34%	0.13%	0.69%	0.81%	1.02%	1.07%

In accordance with Bank Indonesia Regulation Number 13/1/PBI/2011, profitability is assessed through the Return On Asset or ROA ratio. In table 1 above, the ROA ratio is presented which shows the level of profitability of the Persero banks from 2014 to 2023. Based on the ranking assessment criteria, BTN's ROA ratio in 2014 and 2018-2023 and BNI in 2020-2021 were below rank 1 (Maulana et al., 2023), this indicates that the bank has not maximized profit. A low ROA ratio indicates that management has not been able to manage assets properly to increase revenue and reduce costs. This study aims to determine how bad debts and lending of each Persero bank affect the bank's financial performance in terms of profitability.

Based on the phenomenon that has been described, there are research questions that include: 1) How does bad credit affect the profitability of Persero Bank; 2) What

is the effect of Credit Distribution on the Profitability of the Persero Bank; 3) What is the effect of bad debts and loan disbursement on the profitability of Bank Persero. To answer the research questions, bad debts proxied through the NPL ratio and lending proxied through the LDR ratio are analyzed in influencing profitability proxied through the ROA ratio.

2. LITERATURE REVIEW

Signaling theory

Signaling theory explains how company management conveys financial statement information to the public to avoid information imbalances between internal and external parties. In this case, the signal is a reference given by the company to outsiders as a business assessment, and helps them make decisions. Therefore, the signal provided must be very significant and of high quality (Gumanti, 2012). Signal theory is applied by company management in presenting credible information through data related to financial statements, such as financial ratios.

In Bank Indonesia Regulation Number 14/14/PBI/2012, banking companies are required to present financial reports consisting of annual, quarterly, monthly, consolidated, and other publications. The bank's financial statements presented must include a balance sheet, profit/loss statement, statement of changes in equity, and cash flow statement that have been analyzed using ratios. These ratios serve as a reference for evaluating the bank's financial performance. Evaluation of financial performance can be measured by the company's efficiency in managing assets to generate profits or profitability. Several factors including bad debts shown in the NPL ratio and lending shown in the LDR ratio can affect profitability shown in the ROA ratio.

Banks earn most of their profits from interest on loans given to debtor customers. This shows that the number of loans disbursed can increase bank income. However, the high distribution of loans must be commensurate with the low ratio of non-performing loans. The high ratio of non-performing loans indicates that there are more bad debts. Therefore, non-performing loans and lending are considered to affect the bank's ability to generate profits.

Research hypothesis

The NPL or Non Performing Loan ratio shows the performance of bank credit quality. High non-performing loans increase the cost of provisioning for earning assets and other operating costs. This situation will affect the financial performance of a bank in generating profitability. Based on previous research by Maulana et al. (2023), the NPL ratio has a negative and significant effect on the ROA ratio. Research with similar results was also conducted by Sadi'yah et al. (2021), Korompis et al. (2020), and Anggraeni & Citarayani (2022). In general, the hypothesis is formulated as follows based on a summary of theory and previous research:

H1: Bad Debt (NPL) has a negative effect on Profitability (ROA)

The LDR ratio or Loan to Deposit Ratio is a ratio that measures the performance of bank lending. The high number of loans disbursed can increase interest income. This condition will have an impact on the financial performance of a bank in generating profitability. Based on previous research by Sadi'yah et al. (2021) the LDR ratio has a positive and significant effect on profitability. Research with similar results was also conducted by Pratama et al. (2021), Korompis et al. (2020), and Nadzifah & Sriyana (2020).In general, the hypothesis is formulated as follows based on a summary of theory and previous research:
H2: Lending (LDR) has a positive effect on Profitability (ROA)

NPL and LDR ratios are ratios used in measuring banking performance. These ratios can affect banking financial performance in generating bank profitability. Based on previous research by Maulana et al. (2023), the NPL and LDR ratios have a simultaneous influence on the ROA ratio. Research with similar results was also conducted by Sadi'yah et al. (2021), Korompis et al. (2020), and Anggraeni & Citarayani (2022). In general, the hypothesis is formulated as follows based on a summary of theory and previous research:
H3 : Bad Debt (NPL) and Lending (LDR) have an effect on Profitability (ROA)

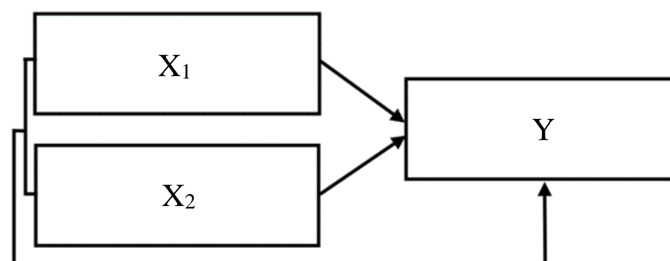


Figure 1. Research Model

3. RESEARCH METHODS

This research uses quantitative methods used to test certain populations or samples based on predetermined hypotheses (Sugiyono, 2024). The type of data in this study is a type of secondary data in the form of financial ratios. The data obtained is sourced from the Financial Services Authority website and the publication of the annual financial statements of Bank Persero in the 2014-2023 period. The test used in this study is partial and simultaneous hypothesis testing to determine how the dependent variable is influenced by the independent variable. The analysis used in this study is multiple linear regression analysis involving the dependent variable (Y) and the independent variables (X1 and X2) with the regression equation as follows:

$$Y = \alpha + \beta 1.X1 + \beta 2.X2 + \varepsilon$$

Notes:
Y = *Return On Asset* (ROA)
α = constanta

β1-β3 = regression coefficient
X1 = *Non Performing Loan* (NPL)
X2 = *Loan to Deposit Ratio* (LDR)
ε = *Error*

The population in this study were all Persero Banks in Indonesia registered with the Financial Services Authority (OJK) in 2014-2023. The sampling technique used Non-Probability Sampling with total sampling. Non-Probability Sampling is a sampling technique that does not provide equal opportunities for members of the population to be selected as samples (Sugiyono, 2024). So that 4 Persero Banks (BRI, Mandiri, BNI, and BTPN) were obtained. The sample in this study was 40 data for 10 years.

The bad credit variable is proxied through the NPL or Non Performing Loan ratio which is the ratio of loans with substandard, doubtful, and bad quality. According to Bank Indonesia Regulation Number 15/2/PBI/2013, a bank's NPL ratio must not exceed 5% to be considered healthy. The NPL ratio stipulated in OJK Circular No.9 of 2020 is as follows:

$$NPL = \frac{Non-performing\ loans\ (substandard, doubtful, and\ loss)}{Total\ loans}\ x\ 100\%$$

The lending variable is proxied through the LDR ratio or Loan to Deposit Ratio which is a measurement ratio in showing how expansive the bank is in lending. A high LDR ratio indicates that the bank performs its intermediary function in channeling funds well. According to Bank Indonesia Regulation Number 17/11/PBI/2015, banks that are considered healthy have a liquidity ratio between 78% and 92%. The LDR ratio set out in SE OJK No.9 of 2020 is as follows:

$$LDR = \frac{Loans}{Third\ party\ funds}\ x\ 100\%$$

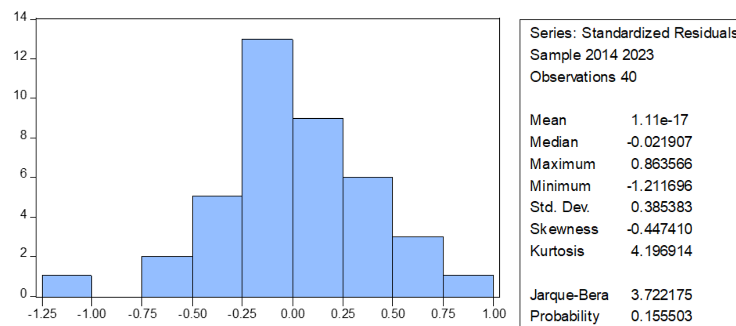
The profitability variable is proxied through the ROA or Return on Asset ratio which is a measurement ratio in showing the bank's efficiency in generating overall profits. This ratio reflects the level of efficiency of the bank's performance. The ROA ratio set out in SE OJK No.9 of 2020 is as follows:

$$ROA = \frac{Earnings\ before\ tax}{Average\ total\ assets}\ x\ 100\%$$

4. RESULTS AND DISCUSSION

Results

Normality test



Source: Eviews (2024)

Figure 2. Normality test

Based on Figure 2, the probability value of 0.155 is obtained, which shows that it is greater than the α coefficient of 0.05. This means that the data used in the analysis is normally distributed.

Multikolinearity test

Table 1. Multikolinearity test

	NPL	LDR
NPL	1.000000	0.406773
LDR	0.406773	1.000000

Source: Eviews (2024)

Based on table 2, a value of 0.406 is obtained, which is smaller than the coefficient of 0.8. This means that the data used in the analysis is not affected by multicollinearity.

Heteroscedasticity test

Table 2. Heteroscedasticity test

	Value	df	Probability
Likehood ratio	7.247349	4	0.1234

Source: Eviews (2024)

Based on table 3 above, the probability value is 0.123 which is greater than the α coefficient of 0.05. This means that the data used in the analysis does not detect heteroscedasticity.

Multiple Linear Regression tests

Table 4. Multiple Linear Regression tests

Variable	Coefficient	Std. Error	t-Statistic	Prob
C	3.242802	1.159595	2.796494	0.0084
NPL	-0.794070	0.093540	-8.489080	0.0000
LDR	0.016514	0.012586	1.312098	0.1983

Source: Eviews (2024)

Based on table 4, the results of multiple linear regression equations are formulated as follows:

$$\mathbf{Y = 3.242 - 0.794\ X1 + 0.016\ X2 + \varepsilon}$$

From the equation above, it can be explained that:

1. 1. The constant value is 3.242, this indicates that the profitability value (ROA) is 3.242 if the value of the independent variable is assumed to be equal to zero.
2. The bad credit (NPL) coefficient value is -0.794, this indicates that profitability (ROA) will decrease by 0.794 if there is a 1 unit increase in bad credit (NPL) assuming other variables are constant.
3. The coefficient value of lending (LDR) is 0.016, this indicates that profitability (ROA) will increase by 0.016 if there is a 1 unit increase in lending (LDR) assuming other variables are constant.

Simultaneous Test Results (F Test)

Table 5. F Test

Effects Specification			
Cross-section fixed (dummy variables)			
R-squared	0.886599	Mean dependent var	2.504750
Adjusted R-squared	0.869922	S.D. dependent var	1.144413
S.E of regression	0.412748	Akaike info criterion	1.205522
Sum squared resid	5.792268	Schwarz criterion	1.458853
Log likehood	-18.11043	Hannan-Quinn criter	1.297118
F-statistic	53.16402	Durbin-Watson stat	1.129180
Prob(F-statistic)	0.000000		

Source: Eviews (2024)

Based on table 5, the research results were obtained with a Prob (F-statistic) value of 0.000 <0.05. This can be interpreted that simultaneously or together there is an influence of bad debts (NPL) and lending (LDR) on profitability (ROA) at Bank Persero.

Partial Test Results (T Test)

Table 6. T Test

Variable	Coefficient	Std. Error	t-Statistic	Prob
C	3.242802	1.159595	2.796494	0.0084
NPL	-0.794070	0.093540	-8.489080	0.0000
LDR	0.016514	0.012586	1.312098	0.1983

Sourcer: Eviews (2024)

Based on table 6, the research results obtained with a probability value of NPL of 0.000 <0.05 and a negative direction of -0.794. This can be interpreted that there is a negative and significant effect on bad debts (NPL) on profitability (ROA) at Bank Persero. While the probability value of LDR is 0.198> 0.05 and a positive direction of 0.016. This means that there is no effect on distribution (LDR) on profitability (ROA) at Bank Persero.

Coefficient of Determination (R^2)

Table 7. Coefficient of Determination

Effects Specification			
Cross-section fixed (dummy variables)			
R-squared	0.886599	Mean dependent var	2.504750
Adjusted R-squared	0.869922	S.D. dependent var	1.144413
S.E of regression	0.412748	Akaike info criterion	1.205522
Sum squared resid	5.792268	Schwarz criterion	1.458853
Log likehood	-18.11043	Hannan-Quinn criter	1.297118
F-statistic	53.16402	Durbin-Watson stat	1.129180
Prob(F-statistic)	0.000000		

Sourcer: Eviews (2024)

Based on table 7, the R2 or R-Squared value is 0.88 or 88%. This can be interpreted that profitability is influenced by bad debts and lending by 88% and the remaining 12% is the influence of other variables outside the study.

Discussion

Effect of NPL on ROA

Based on the results of the T test or partial test in table 6, it is found that the bad credit variable (NPL) has a negative and significant effect on the profitability variable (ROA) at the Persero Bank for the 2014-2023 period. The negative sign on the NPL coefficient value means that the independent variable and the dependent variable have an unidirectional relationship. The results obtained in this study are in line with the research of Silitonga & Manda (2022) and Adhim (2018) which state that NPL has a significant negative effect on ROA.

Thus it can be seen if the first hypothesis (H1) which has a statement that bad debts have a negative effect on profitability is accepted. The number of bad debts by debtors can result in losses to the bank. The losses that occur affect the overall decline in profitability at the Persero bank. This can happen when the debtor fails in his business, thus affecting the bank's credit payments.

Effect of LDR on ROA

Based on the results of the T test or partial test in table 6, it is found that the lending variable (LDR) has no effect on profitability (ROA) at the Persero Bank for the period 2014-2023. The results obtained in this study are in line with the research of Adhim (2019) and Sunaryo et al. (2021) which state that NPL has a significant negative effect on ROA.

Thus it can be seen that the second hypothesis (H2) which has a statement that lending has a positive effect on profitability is rejected. The high level of increase or decrease in lending has no impact on the profitability of the Persero bank. This can happen if lending to Persero banks is not too high, so that income from loan interest has no effect on bank profitability.

Effect of NPL and LDR on ROA

Based on the results of the F test or simultaneous test in table 5, it is found that the bad credit variable (NPL) and the lending variable (LDR) together have a significant effect on the profitability variable (ROA) at Bank Persero for the period 2014-2023. So that the third hypothesis (H3) which has a statement that bad debts (NPL) and lending (LDR) simultaneously affect profitability (ROA) is accepted. Changes in the high and low levels of NPL and LDR ratios together will affect the high and low ROA ratios at Bank Persero for the 2014-2023 period.

Based on the results of the research conducted, the multiple regression equation obtained is $Y = 3.242 - 0.794 X1 + 0.016 X2 + \varepsilon$. The results of the analysis on the coefficient of determination (R2) show that the bad credit and lending variables have an influence of 0.88 or 88% on profitability, while the remaining 12% is influenced by other variables not included in the study. This is in line with signal theory which states that financial reports such as financial ratios can be used as a business assessment by external parties. The high NPL ratio can cause external parties to assess that the bank concerned does not have good governance, so that it can cause a decrease in the ROA ratio.

5. CONCLUSION

Based on the research that has been conducted, it can be concluded that the bad credit variable proxied through the NPL ratio has a negative and significant effect on the profitability of Bank Persero for the 2014-2023 period. Furthermore, the lending variable proxied through the LDR ratio has no effect on profitability at Bank Persero for the 2014-2023 period. While the results are simultaneous or together, the variables of bad credit and lending affect profitability proxied through the ROA ratio of the Persero Bank in the 2014-2023 period.

For future researchers with topics related to banking profitability, it is hoped that they can add other variables in the study to get better results. Because in this study there are independent variables that have no effect on the dependent variable, this does not rule out the possibility of adding moderating variables that can strengthen or weaken the relationship between variables.

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