

THE EFFECT OF FINANCIAL PERFORMANCE, LEVERAGE, CREDIT, AND TIME ON THE RISK OF BAD DEBTS WITH COMPANY SIZE AS A MODERATING VARIABLE

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ABSTRACT

The purpose of this study was to determine and analyze the effect of financial performance, leverage, credit, and time on the risk of bad credit with company size as a moderating variable. The research method used in this research is quantitative. The population in this study were 47 commercial banks going public in Indonesia listed on the Indonesia Stock Exchange for the period 2016-2023, so the data used were 141 samples. The results showed that the variables studied had a significant influence on the risk of bad credit. First, the financial performance variable has a coefficient value of 1.84 with a significance value of 0.017. These results indicate that financial performance has a positive effect on the risk of bad debts, with every 1% increase in financial performance will increase non-performing loans by 1.84% ceteris paribus. Second, the leverage variable also has a positive effect on non-performing loans, with a coefficient of 0.17 and a significance value of 0.0055. This indicates that every 1% increase in leverage will increase non-performing loans by 0.17% ceteris paribus. The implication of this study is the importance of tighter risk management in managing financial performance and leverage in commercial banks, especially in volatile periods such as the Covid-19 pandemic. Bank managers should pay attention to these indicators in making strategic decisions to minimize the risk of bad debts. In addition, this study provides insights for regulators to strengthen financial supervision policies to maintain the stability of the banking system in Indonesia.

KEYWORDS Financial Performance, Leverage, Credit.



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INTRODUCTION

Banks are one of the institutions that play an important role in the economy of a country including Indonesia. According to Law Number 10 of 1998 concerning Banking, a bank is a business entity that collects funds from the public in the form of deposits and distributes them to the public in the form of credit and or other forms in order to improve the lives of many people. Banks and other financial institutions are the factors that drive financial markets. Without them financial markets would not be able to channel funds from people who save to people who have productive investments. Thus, banking financial institutions play an important role in a country's economy (Mishkin, 2007).

The banking sector is one of the factors driving the country's economic growth, although the contribution of the banking sector in Indonesia is small, but the sector is influential in channeling credit to other sectors. Banking has the main function of collecting funds in the form of deposits and channeling funds in the form of credit to the public, known as an intermediary institution for people who have excess funds (surplus) and lack of funds (deficit). The function of banks as trust institutions is that the intermediation activities carried out by the banking world are based on the principle of trust, namely the activities of raising funds carried out must be based on trust from the public. Trust is related to the security of public funds in each bank. In addition, the trust aspect is also related to the customer's ability to repay the loan he has received, both interest installments and principal repayments. Banks earn income from the difference between the interest earned and the cost of credit issued as a return on lending services, although followed by the emergence of bad credit risks (Latumaerisaa, 2014).

The risk of non-performing loans can be seen from the ratio of non-performing loans which shows the number of substandard, doubtful, and non-performing loans to total loans disbursed (Bank Indonesia, 2015). Figure 1.1 shows the risk of non-performing loans reflected by non-performing loans of commercial banks in Indonesia in 2016-2023.

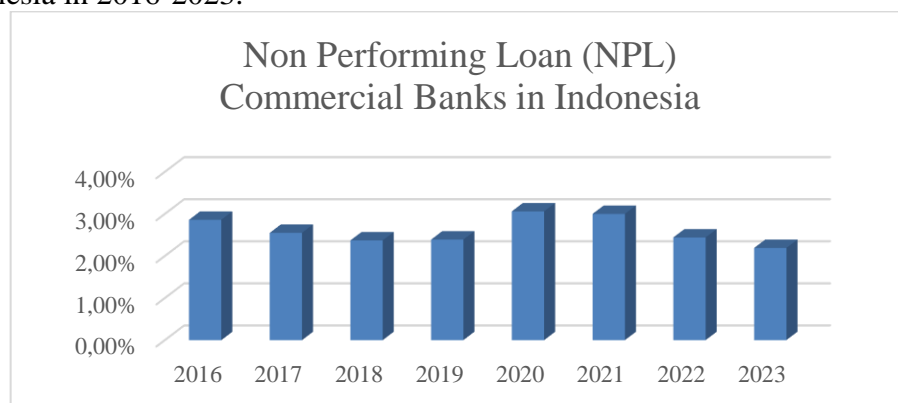


Figure 1. Non-performing loans of commercial banks in Indonesia.

Source : (Financial Services Authority, 2022)

Figure 1 shows the movement of non-performing loans in the last eight years. During 2016-2019 the risk of non-performing loans in Indonesia had an average of 2.54%, while 2020-2023 had a higher average of 2.67%. In 2020, non-performing loans in Indonesia increased significantly from 2.39% to 3.06%, making it the

highest value in the last eight years. This increase was caused by the emergence of the Covid-19 pandemic in Q1 2020, resulting in a lockdown of several months. The lockdown had an impact on hampering national economic activity so that some people did not get income which caused people to be unable to pay credit and non-performing loan ratios (Financial Services Authority, 2022).

This research is expected to contribute to the benefits of accounting literature as reference material for research, especially related to bad credit risk, and is also expected to be useful for the Financial Services Authority as a consideration for improving regulations related to the implementation and implementation of banking in Indonesia, and can contribute to opening insights for parties who utilize financial reports in decision making.

RESEARCH METHOD

This research uses panel data, which is a combination of cross-section data and time-series data. The data used in this study are quantitative and secondary data. Secondary data is obtained from the financial statements of banking companies in 2016-2023. Financial reports can be obtained from the Indonesia Stock Exchange (IDX) on the site www.idx.co.id. The population in this study were 47 go public commercial banks in Indonesia listed on the Indonesia Stock Exchange for the period 2016-2023, so the data used were 141 samples. The data used is each individual commercial bank go public due to data completeness, because the bank is required to report the company's financial condition every certain period of time, namely quarterly and annually. Sampling is done by purpose sampling with the aim of obtaining a representative sample in accordance with the specified criteria. The sample used in the study was a go public commercial bank listed on the Indonesia Stock Exchange before 2016. The analysis used in this study is a panel data analysis method carried out by quantitative and descriptive methods.

RESULT AND DISCUSSION

Description of Research Subjects

Descriptive analysis is a method used to describe or analyze a research result but is not used to make broad conclusions (Sugiono, 2017). Table 4.1 below is the result of descriptive analysis of this research. The study uses one dependent variable, namely the risk of bad credit, and four independent variables, namely financial performance, leverage, credit and time, as well as one moderating variable, namely company size.

Table 1. Descriptive Analysis

	NPL	KIN	LEV	CREDIT	TIME
Mean	3.320393	0.743943	81.29771	1.277867	0.501792
Median	2.840000	1.095000	83.49000	7.290000	0.500000
Maximum	22.27000	4.760000	149.3800	491.3200	1.000000
Minimum	0.000000	-15.89000	33.00000	-64.09000	0.000000
Std. Dev.	2.428476	2.809330	10.14590	42.03358	0.500895
Skewness	3.008190	-2.799242	-0.578981	6.658651	-2.32596
Kurtosis	19.15540	14.20318	14.05808	66.84979	1.000000
Jarque-Bera	3467.260	1829128	1437.105	49454.46	46.66667
Probability	0.000000	0.000000	0.000000	0.000000	0.000000
Sum	929.7100	207.5600	22682.06	3565.250	140.0000
Sum Sq. Dev.	1639.513	2178.341	28617.09	491176.5	69.74910
Observations	280	280	280	280	280

Source: Eviews

Table 4.1 above shows the mean, median, maximum, minimum, and standard deviation values of each variable used. The bad credit risk variable proxied by non-performing loans has an average value of 3.32% which is lower than the non-performing loan limit of 5% based on Bank Indonesia Regulation No.13/1/PBI/2011 with a mean value of 2.84%. The highest non-performing loan of 22.27% is the risk of bad credit from Bank Pembangunan Daerah Banten Tbk in 2020. The high non-performing loan of Bank Pembangunan Daerah Banten Tbk in that year was due to the existence of Covid-19 in Indonesia and the bank restructured the debtors with the impact of Covid-19 and continued to strive for the settlement of non-performing loans. While the lowest value of non-performing loans is 0% by Bank Artos Indonesia Tbk, this is because the bank has succeeded in reducing non-performing loans to near zero through the sale of bad and doubtful loans. Bank Artos maintains credit quality and supports the national economic recovery program by issuing policies and provisions related to credit facility restructuring policies for debtors affected by Covid-19 as a follow-up to POJK No. 11/POJK.03/2020 dated March 13, 2020 concerning National Economic Stimulus as a Countercyclical Policy Impact of the Spread of Coronavirus Disease (Covid-19).

The financial performance variable proxied by return on assets has an average value of 0.74% where the return on assets value is greater than 0.50%, which means that on average from 2016-2023 commercial banks in Indonesia have a fairly healthy return on assets with a median value of 1.01%. The highest return on assets of 4.76% is Bank Harda International Tbk in 2023, this is because the bank is conducting sustainable market penetration into various customer segmentations and significantly increasing digital services which have an impact on increasing assets and liabilities. While the lowest return on assets of -15.89 was Bank Artos Indonesia Tbk in 2019, the low return on assets of the bank was caused by the acquisition

process of 51% share ownership by new shareholders, namely PT Metamorfosis Ekosistem Indonesia and Wealth Track Technology Limited.

The leverage variable proxied by the Debt to Total Asset Ratio (DAR) has an average value of 81.31%. This value is included in the high level because it means that the average commercial bank in Indonesia has a debt burden of 81.31% compared to its assets. The highest debt to total asset ratio belongs to Bank Oke Indonesia Tbk at 149.38% because in 2018 the bank diversified its business both in terms of assets and liabilities. Until the end of 2018, the bank continued to develop its loan portfolio and focus on the SME business segment while still maximizing the distribution of financing to the selective BPR and Multifinance segments. Bank Oke Indonesia Tbk also started to develop multipurpose financing to expand its loan portfolio. The existence of business diversification in terms of assets and liabilities has caused the bank to have a very high debt to total asset ratio value of 149.38%, which means that the debt burden is greater than the existing assets. This is quite dangerous because if the company occurs liquidity, it has a debt burden that is more than its ability to pay with assets. Meanwhile, the lowest value is 33%, this happened because Bank Artos Tbk in 2021 increased capital and formed a digital bank by building fundamentals and validating principles related to technology, human resources and cooperation with partners. This causes the debt burden owned by Bank Artos to decrease due to the addition of asset capital which is reflected in the small value of the debt to total asset ratio.

The credit variable used in this study is credit growth in the current month because it adjusts the units of other variables, namely percent. Credit growth in 2016-2023 has an average value of 1.27%. The highest credit growth value was 491.32% in 2021 by Bank Artos Indonesia Tbk, this is because the bank increased capital and formed a digital bank which caused the capital to be channeled into credit so that credit growth increased significantly. Meanwhile, the lowest value was -64.09% by Bank Capital Indonesia Tbk in 2021, a significant decrease in bank credit growth was due to the fact that it still could not withstand the impact of Covid-19 with the emergence of the delta variant (2020) and the Omicron variant at the end of 2021 again increasing the tension of uncertainty, which had an impact on people's caution in consuming and choosing to keep their funds in various banking instruments. The time variable uses a dummy variable, where the value 0 is for 2016-2019 which is 4 years before the occurrence of Covid-19, while the value 1 is 4 years during the existence of Covid-19, namely 2020-2023. This is to distinguish whether there are significant differences related to bank health before Covid-19 and during Covid-19.

Description of Research Objects

The research object used in this study is a public banking company listed on the Indonesia Stock Exchange in 2016-2023. Sampling was carried out using the purpose sampling method with the aim of obtaining a representative sample in accordance with the specified criteria. The sample used in the study was a go public

commercial bank listed on the Indonesia Stock Exchange before 2016. Because if a bank announces going public in 2016 there is a distance of time the bank has not gone public, so it cannot be included in the sample. The sample selection criteria in this study are shown in Table 4.1 below,

Table 2. Research Sample Criteria

No.	Sample Criteria	Number of Banks
1.	Commercial banks listed on the Indonesia Stock Exchange in 2023	47
2.	Commercial banks listed after 2016 on the Indonesia Stock Exchange	(6)
3.	Has a complete financial report that can be accessed on the website	(6)
Object of Research		35 Companies
Research Time		8 Years
Number of Research Samples		280mpel

Source: Modified

Regression Model Selection

In panel data analysis, there are three models that can be used, namely the Common Effect Model (CEM), Fixed Effect Model (FEM) and Random Effect Model (REM). To select the panel data regression model can be done through the Chow test, Hausman test, and Lagrange Multiplier (LM) test. This research tests the selection of the non-performing loan equation model because it uses the Panel Least Squares (PLS) method.

Chow Test

The Chow test is conducted to determine which model is better between common effect and fixed effect, while the Chow test results are:

Table 3. Chow Test Results

Redundant Fixed Effects Tests			
Equation: FEM			
Test cross-section fixed effects			
Effects Test	Statistic	d.f.	Prob.
Cross-section F	4.794194	(34,236)	0.0000
Cross-section Chi-square	146.512967	34	0.0000

Source: Eviews

Based on the chow test shown in Table 4.3, it shows that in the non-performing loan equation, the statistical chi-square value (146.51) > chi-square table (48.60) with a confidence level of 95%. Thus it can be concluded that H0 is rejected so that the better model is fixed effect. The conclusion from the Chow test is that the fixed effect model is better than the common effect model.

Hausman Test

The Hausman test is conducted to determine which model is better between random effect and fixed effect with the following test results:

Table 4. Hausman Test Results

Correlated Random Effects - Hausman Test			
Equation: REM			
Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	22.800987	8	0.0036

Source: Eviews

Based on the Hausman test displayed in Table 4.4, it shows that in the non-performing loan equation, the statistical chi-square value (19.08) < chi-square table (21.95) with a confidence level of 95%. Thus it can be concluded that H0 is rejected so that the better model is fixed effect. Because the Chow test and Hausman test have selected a better fixed effect model, the model used in this study is the fixed effect model and the Lagrange Multiplier Test is not performed.

Classical Assumption Test Results

Autocorrelation Test

Autocorrelation testing aims to see if in a linear regression model there is a correlation between period t confounding errors and period t-1 (previous) errors. Thus, the autocorrelation test can only be performed on time series data. This study ignores the autocorrelation test because the data used in this study is panel data. According to Basuki & Prawoto (2017),

Heteroscedasticity Test

Heteroscedasticity testing is carried out to determine whether the disturbance variable has a variant that is not constant or heteroscedasticity. This study uses the White method heteroscedasticity test with the following hypothesis:

H0: there is no heteroscedasticity

Ha: there is heteroscedasticity

Table 5. Heteroscedasticity Test

Dependent Variable: ABS(RESID)				
Method: Panel Least Squares				
Date: 06/13/24 Time: 05:42				
Sample: 2016 2023				
Periods included: 8				
Cross-sections included: 35				
Total panel (unbalanced) observations: 279				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.547010	0.948748	0.576560	0.5648
KIN	0.492840	0.371874	1.325289	0.1864
LEV	0.001787	0.039929	0.044762	0.9643
CRE	-0.033028	0.030201	-1.093619	0.2752
TIME	-0.768254	1.383862	-0.555152	0.5793
KINSIZE	-0.035255	0.022987	-1.533731	0.1264
LEVSIZ	0.000410	0.002589	0.158417	0.8743

CRESIZE	0.001830	0.001846	0.991309	0.3225
TIMESIZE	0.033926	0.076326	0.444491	0.6571

Source: Eviews

Based on table 4.6 shows that the variables of leverage (LEV), financial performance (KIN), time (TIME), the interaction of leverage with company size (LEVSIZ), and the interaction of time with company size (TIMESIZ) have significant values > 0.05 so it can be concluded that heteroscedasticity does not occur, while the variables of financial performance (KIN), credit (CRE), interaction of financial performance with company size (KINSIZ), and interaction of time with company size (TIME SIZE) < 0.05 so it can be concluded that heteroscedasticity occurs, which means that there is an inequality of variance from the residuals of one observation to another in the regression model.

This study has a heteroscedasticity problem, so it is overcome by using the Generalized Least Square (GLS) approach with cross section weight parameters in estimating the selected model. GLS can overcome the problem of heteroscedasticity without the need to test again. This method refers to (Muhammad Lukman k. et al., 2013), and (Ticoalu et al., 2021).

Multicollinearity Detection

Multicollinearity detection testing is carried out to determine the linear relationship that occurs between the independent variables or independent variables used. There are various ways to test multicollinearity, namely analyzing the correlation matrix with Pearson Correlation. The following are the multicollinearity results of this study

Table 6. Multicollinearity Test Results

	KIN	LEV	CRE	TIME	KINSIZE	LEVSIZ	CRESIZ	TIMESIZ	
KIN	1	0.07824174998850.01099913472920.04420818935410.99323014781680.29544368477300.02960527154980.0071027852284	0.009	0.0398	0.7198	0.089	0.75	0.7546	
LEV	0.0782417499885	1	0.38207101424280.17257082804920.07273462524480.81409237291620.36787336813700.1286312825258	0.009	0.693	0.804	0.3845	0.589	
CRE	0.01099913472920.3820710142428	0.3820710142428	1	0.07010705847270.01164731058900.31124835545280.99815504654550.0473936265196	0.0398	0.693	0.1	0.1255	
TIME	0.04420818935410.17257082804920.0701070584727	0.04420818935410.17257082804920.0701070584727	0.04420818935410.17257082804920.0701070584727	1	0.04987600415430.04201873879110.06850042786590.9911182759729	0.07198	0.804	0.1255	
KINSIZE	0.99323014781680.07273462524480.01164731058900.0498760041543	0.99323014781680.07273462524480.01164731058900.0498760041543	0.99323014781680.07273462524480.01164731058900.0498760041543	0.99323014781680.07273462524480.01164731058900.0498760041543	1	0.32345446812570.03175721839110.0068731713099	0.089	0.3845	
LEVSIZ	0.29544368477300.81409237291620.31124835545280.04201873879110.3234544681257	0.29544368477300.81409237291620.31124835545280.04201873879110.3234544681257	0.29544368477300.81409237291620.31124835545280.04201873879110.3234544681257	0.29544368477300.81409237291620.31124835545280.04201873879110.3234544681257	0.29544368477300.81409237291620.31124835545280.04201873879110.3234544681257	1	0.28711128887650.0392276472827	0.755	0.589
CRESIZ	0.02960527154980.36787336813700.99815504654550.06850042786590.03175721839110.2871112888765	0.02960527154980.36787336813700.99815504654550.06850042786590.03175721839110.2871112888765	0.02960527154980.36787336813700.99815504654550.06850042786590.03175721839110.2871112888765	0.02960527154980.36787336813700.99815504654550.06850042786590.03175721839110.2871112888765	0.02960527154980.36787336813700.99815504654550.06850042786590.03175721839110.2871112888765	0.02960527154980.36787336813700.99815504654550.06850042786590.03175721839110.2871112888765	1	0.7546	0.885
TIMESIZ	0.00710278522840.12863128252580.04739362651960.99111827597290.00687317130990.03922764728270.0481053359365	0.00710278522840.12863128252580.04739362651960.99111827597290.00687317130990.03922764728270.0481053359365	0.00710278522840.12863128252580.04739362651960.99111827597290.00687317130990.03922764728270.0481053359365	0.00710278522840.12863128252580.04739362651960.99111827597290.00687317130990.03922764728270.0481053359365	0.00710278522840.12863128252580.04739362651960.99111827597290.00687317130990.03922764728270.0481053359365	0.00710278522840.12863128252580.04739362651960.99111827597290.00687317130990.03922764728270.0481053359365	0.00710278522840.12863128252580.04739362651960.99111827597290.00687317130990.03922764728270.0481053359365	0.67076	0.991

Source: Eviews

According to Gujarati (1995) if the correlation between two independent variables exceeds 0.8 then there is a multicollinearity problem. If the correlation between the explanatory variables is not greater than the correlation of the dependent variable with each explanatory variable, it can be said that there is no serious problem. If there is a multicollinearity problem, there are the following ways, namely replacing or removing variables that have a high correlation, increasing the

number of observations or samples, transforming data into other forms, for example logarithms and natural logarithms.

Normality Test

Normality testing is carried out to determine whether the residuals are normally distributed or not. This study uses the Jarque-Bera method with the following hypothesis:

- H0: residuals are normally distributed
- Ha: residuals are not normally distributed

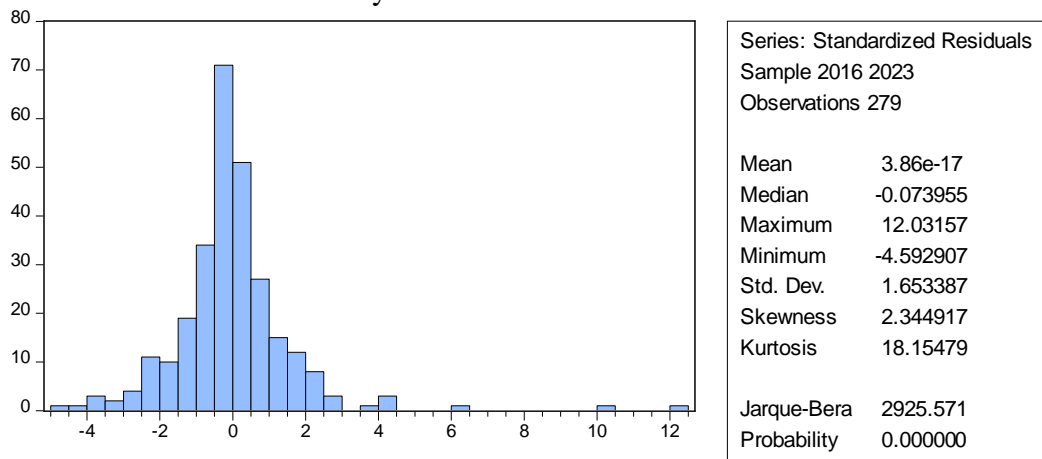


Figure 2. Multicollinearity Test Results

Source: Eviews

The normality test results according to table 4.8 state the probability results of the standardized residual data of 0.000000 < 0.05 so it can be concluded that the residual data is not normally distributed. According to (Hair et al., 2018), the normality test needs to be done if the number of observations is less than 50, to determine whether the error value is normally distributed. If the research data is large, namely more than 200 data, then the normality test can be ignored. This study ignores the normality test because the data used in this study amounted to 280 or more than 200.

Hypothesis Test Results

The estimation results of the non-performing loan equation with the fixed effect model and the Panel Least Squares (PLS) method are summarized in the table below.

Table 7. Hypothesis Test Results of Fixed Effect Model

Dependent Variable: NPL					
Method: Panel Least Squares					
Date: 06/13/24 Time: 05:30					
Sample: 2016 2023					
Periods included: 8					
Cross-sections included: 35					
Total panel (unbalanced) observations: 279					
Variable	Coefficient	Std. Error	t-Statistic	Prob.	Prob.

The Effect of Financial Performance, Leverage, Credit, and Time on Bad Credit Risk with Company Size as a Moderating Variable

				1 Tailed	2 Tailed
C	6.405713	1.590419	4.027688	0.0001	0.0001
KIN	1.844671	0.623385	2.959121	0.0034	0.0017
LEV	0.171267	0.066934	2.558751	0.0111	0.0055
CRE	-0.072742	0.050627	-1.436811	0.1521	0.0760
TIME	-1.097898	2.319814	-0.473270	0.6365	0.3182
KINSIZE	-0.118248	0.038533	-3.068710	0.0024	0.0012
LEVSIZ	-0.011396	0.004339	-2.626364	0.0092	0.0046
CRESIZE	0.003806	0.003094	1.230188	0.2199	0.1099
TIMESIZ	0.061798	0.127947	0.482993	0.6295	0.3147
Effects Specification					
Cross-section fixed (dummy variables)					
R-squared	0.536466	Mean dependent var		3.320036	
Adjusted R-squared	0.453973	S.D. dependent var		2.428476	
S.E. of regression	1.794490	Akaike info criterion		4.148182	
Sum squared resid	759.9655	Schwarz criterion		4.707831	
Log likelihood	-535.6714	Hannan-Quinn criter.		4.372684	
F-statistic	6.503145	Durbin-Watson stat		1.780815	
Prob(F-statistic)	0.000000				

Source: Eviews

The constant value of 6.40 means that if the value of KIN, LEV, CRE, TIME, KINSIZE, LEVSIZ, CRESIZ, and TIMESIZ is zero, the non-performing loan will be 6.40. The KIN coefficient of 1.84 means that every 1% increase in financial performance will increase non-performing loans by 1.84% ceteris paribus. The LEV coefficient of 0.17 means that every 1% increase in leverage will increase non-performing loans by 0.17% ceteris paribus. The CRE coefficient of -0.07 indicates that every 1% increase in credit growth will reduce non-performing loans by 0.07% ceteris paribus.

The R-squared in the table above is 0.5364 or 53.64% which indicates that there is a relationship together with the variables of financial performance, leverage, credit, and time to the risk of bad debts contained in this study. The adjusted R-squared value in the table above is 0.45, which means that the variable risk of bad debts with the proxy of non-performing loans in this study can be explained by 45.39% by the variables of financial performance, leverage, credit, and time. The remaining 44.61% is explained by other variables not used in this study.

T-test

The t-statistic test is conducted to determine whether there is an influence of the independent variables individually on the dependent variable with the assumption that the other independent variables are constant. This test uses $df (n-k) = 272$ and the significance level $(\alpha) = 5\%$. Based on the hypothesis in chapter 3, the criteria used in the test are as follows:

$Prob < 0.05 = H_0$ is rejected, meaning that the independent variable has an influence on the dependent variable.

$Prob > 0.05 = H_0$ is accepted, meaning that the independent variable has no influence on the dependent variable.

The regression equation in this study is obtained from the following eviws results

$$\text{NPL} = 6,40 + 1,84\text{KIN} + 0,17\text{LEV} - 0,07\text{CRE} - 1,09\text{TIME} - 0,11\text{KIN} * \text{SIZE} - 0,01\text{LEV} * \text{SIZE} + 0,01\text{CRE} * \text{SIZE} + 0,06\text{TIME} * \text{SIZE}$$

The financial performance variable has a coefficient value of 1.84 and a significance value of 0.017. The significance value is smaller than 0.05, meaning that H0 is rejected so that financial performance has a positive effect on the risk of bad credit. When the Return On Asset ratio is getting bigger, it will be followed by an increase in non-performing loans, the greater the return on asset ratio of commercial banks means that the more efficient and optimal a bank manages its assets to earn profits, the greater the level of profit / profit obtained and the greater the funds channeled, so that the higher the loan disbursed. The large number of loans disbursed by the bank will increase the ratio of bad debts by commercial banks. The results of this study are in accordance with (Dimitras, Dokas, Mamou, & Spyromitros, 2022) which states that financial performance proxied by return on assets has a positive influence on bad credit risk proxied by non-performing loans.

The leverage variable has a coefficient of 0.17 and a significance value of 0.0055. The significance value is smaller than 0.05, meaning that H0 is rejected so that financial leverage has a positive effect on loan performing loans. In this study, leverage is proxied by the ratio of debt to capital which is the balance between the debt owned by the company and the assets owned. The higher this ratio means that the assets owned are less than the debt. Due to the higher debt owned by the commercial bank, the risk of bad credit proxied by non-performing loans will increase. This is what causes leverage to have a positive influence on the risk of bad credit in accordance with (Saada, 2018).

The credit variable has a coefficient of -0.07 and a significance value of 0.0760. The significance value is greater than 0.05, meaning that H0 is accepted so that credit does not have a negative effect on loan performing loans. This is because the amount of credit disbursed has a positive effect on the risk of bad debts of commercial banks, when the amount of credit disbursed is higher, the higher the risk of bad debts obtained by commercial banks.

The time variable is a dummy variable with a value of 0 for the four-year period before Covid-19, namely 2016-2019, while the value of 1 for the four-year period when Covid-19 occurred in 2020-2023.

The interaction of bad credit risk variables on the relationship between financial performance and company size has a coefficient of -0.11 and a significance value of 0.0012. The significance value is smaller than 0.05, meaning that Ha is accepted so that bad credit risk is able to moderate the relationship between financial performance and company size.

The interaction of bad credit risk variables on the relationship between leverage and company size has a coefficient of -0.01 and a significance value of 0.0046. The significance value is smaller than 0.05, meaning that Ha is accepted so that bad credit risk is able to moderate the relationship between leverage performance and company size.

The interaction of bad credit risk variables on the relationship between credit and company size has a coefficient of -0.01 and a significance value of 0.1099. The

significance value is greater than 0.05, meaning that H_a is rejected so that bad credit risk is unable to moderate the relationship between credit and company size.

F-test

The F-statistic test is conducted to see the effect of the independent variables together on the dependent variable. This test uses $df (n-k) = 272$ and the significance level (α) = 5%. The F-test in this model research Prob (F-Statistic) value in the table above is $0.000 < 0.05$, which means that the model used in this study has a significant effect together on the non-performing loan variable.

CONCLUSION

The conclusions that can be drawn from this study are as follows. First, the financial performance variable has a coefficient value of 1.84 and a significance value of 0.017. The significance value that is smaller than 0.05 indicates that H_0 is rejected, so financial performance has a positive effect on the risk of bad debts. The financial performance coefficient of 1.84 indicates that every 1% increase in financial performance will increase non-performing loans by 1.84% *ceteris paribus*. Second, the leverage variable has a coefficient of 0.17 and a significance value of 0.0055. With a significance value smaller than 0.05, H_0 is rejected, so financial leverage has a positive effect on non-performing loans. The higher the leverage ratio shows that the assets owned are less than the debt, and this means that the higher the risk of bad credit which is proxied by non-performing loans. The leverage coefficient of 0.17 means that every 1% increase in leverage will increase non-performing loans by 0.17% *ceteris paribus*. Third, the credit growth coefficient of -0.07 indicates that every 1% increase in credit growth will reduce non-performing loans by 0.07% *ceteris paribus*. However, the credit variable has a significance value of 0.0760 which is greater than 0.05, so H_0 is accepted and credit has no negative effect on non-performing loans. This is due to the positive effect of the amount of credit extended to the risk of non-performing loans of commercial banks; when the amount of credit extended is higher, the risk of non-performing loans is also higher. Finally, the time variable is a dummy variable with a value of 0 for the four-year period before Covid-19, namely 2016-2019, and a value of 1 for the four-year period when Covid-19 occurred in 2020-2023.

REFERENCES

- Andrianto, & Firmansyah, A. (2019). *Islamic Bank Management (Implementation of Theory and Practice)*. Jakarta: CV Qiara Media.
- Bank of Indonesia. (2013). *Bank Indonesia Regulation No. 15/2/PBI/2023 on Determination of Status and Follow-up Supervision of Conventional Commercial Banks*. Jakarta: Bank Indonesia.
- Bank of Indonesia. (2013). *Bank Indonesia Regulation No.15/12/PBI/2013 on the Minimum Capital Adequacy of Commercial Banks*. Jakarta: Bank Indonesia.
- Bank Indonesia. (2015). *Regulation of Bank Indonesia No.17/11/PBI/2015 on the Amendment to the Regulation of Statutory Reserves of Commercial Banks in Rupiah and Foreign Exchange for Conventional Commercial Banks*. Jakarta:

- Bank Indonesia.
- Brigham, E. d. (2016). Book 1. Translation of N.I. Sallama and F Kusumastuti. Jakarta: Fourth Edition.
- Damayanti, A., Ambarwati, S., & Astuti, T. (2017). Prediction of Corporate Bond Ratings with Financial and Non-Financial Factor Approaches. *Journal of Applied Business and Economic*.
- Dimitras, Dokas, Mamou, & Spyromitros. (2022). Investigating The Performance Of European Bans Using Non-Parametric Techniques: The Role Of Performing Loans Efficiency. *Journal Of Financial Regulation And Compliance*, Vol 26(1).
- Fahmi, I. (2016). Introduction to Human Resource Management Concepts and Performance. Jakarta: Mitra Wacana Media.
- Ghozali, I. (2018). Application of Multivariate Analysis with the IBM SPSS 25 Program: Diponegoro University Publishing Agency.
- Hasibuan, M. (2017). Human Resource Management. Jakarta: Bumi Aksara.
- Indonesia, I. B. (2016). Risk Management Governance. Jakarta: Gramedia Pustaka Utama.
- Ismail. (2018). Banking Management From Theory to Application. Jakarta: Kencana.
- Financial Services Authority. (2022). Data and Statistics. Retrieved from <https://ojk.go.id/id/data-dan-statistik/default.aspx>
- Pandia, F. (2017). Bank Health Fund Management. Jakarta: Rineka Cipta.
- Ramadhan, B. H., & Suripto. (2022). The Effect of Company Characteristics, Sales Growth, and Managerial Ownership on Tax Avoidance. *Scientific Journal of Accounting and Finance*, 948-963.
- Rudianto. (2013). Information Management Accounting for Strategic Decision Making. Jakarta: Erlangga.
- Ruggiero. (2022). Bank-Specific Factors And Credit Risk: Evidence From Italian Banks In Different Local Markets. *Joutnal Of Fiacial Regulatio and Compliance*, Vol 3(31).
- Santoso, S. (2010). Nonparametric Statistics. Jakarta: PT Elex Media Komputindo.
- Sekaran, U., & Bougie. (2016). Research Methods For Business: A Skill Building Approach. Seventh Edition. New Jersey: Wiley.
- Sorongan, F. (2020). The Effect of Rentability, Non Performing Loan (NPL), Liquidity, and Inflation on Capital Adequacy Ratio (CAR) at Regional Development Banks for the period 2016-2019. *Indonesian Journal of Science Management Research* Vol 11 (2), 224-243.
- Widarjono, A. (2018). Econometrics: Introduction and Application Accompanied by Eviews Guide, Fifth Edition. Yogyakarta: UPP STIM YKPN.
- Putri, H. R. (2021). Comparative Analysis of Allowance for Impairment Losses Before and After the Implementation of PSAK 71 and its Effect on Earnings in Banks Registered with the Financial Services Authority.
- Kurniawati, Lintang. (2014). On Manufacturing Companies Listed on the Indonesia Stock Exchange. Sebelas Maret University
- Duellmann, K., & Kick, T. 2012. Stress Testing German Banks Against a Global Cost of Capital shock. Deutsche Bundesbank Paper, No. 04/2012.

- Mulyawan, Setia. 2015. *Financial Management, First Printing*. Setia Library: Bandung.
- Priyatno Duwi. 2010. *Understand Statistical Analysis of Data with SPSS. First Printing*. Yogyakarta: Mediakom.
- Sutrisno. 2012. *Financial Management Theory Concepts & Applications, Eighth Printing*. EKONISIA: Yogyakarta.
- Barra, C. and Zotti, R. (2019a), "Bank performance, financial stability and market concentration: evidence from cooperative and non-cooperative banks", *Annals of Public and Cooperative Economics*, Vol. 90 No. 1,
- Barra, C. and Zotti, R. (2019b), "Market power and stability of financial institutions: evidence from the Italian banking sector", *Journal of Financial Regulation and Compliance*, Vol. 28 No. 2,
- Beck, R., Jakubik, P. and Piloju, A. (2013), "Non-performing loans: what matters in addition to the economic business cycle?", *ECB Working Paper Series 1515*, Beck, T., Büyükkarabacak, B., Rioja, F. and Valev, N. (2012), "Who gets the credit? And does it matter? Household vs firm lending across countries", *The B.E. Journal of Macroeconomics*, Vol. 12 No. 1,