Non-Performing Loans Indonesian Banking Industry: Before and During Covid-19 Pandemic

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Article Information	Abstract
	This study examines the factors influencing Non-Performing Loans in the Indonesian Banking Industry, specifically the Bank Group based on Core Capital (KBMI) 4, both before and during the COVID-19 Pandemic. Secondary data, spanning from January 2019 to September 2021, is utilized in this analysis. The study employs the error correction (ECM) model through regression analysis techniques. The findings indicate that the Loan Deposit Ratio and Bank Indonesia (BI) Rate significantly and negatively impact Non-Performing Loans in both the short and long term. Furthermore, the Dummy COVID-19 variable significantly and positively influences Non-Performing Loans in both the short and long term. While Net Interest Margin exhibits a positive but non-significant effect in the short term, it demonstrates a positive and significant effect on Non-Performing Loans in the long term.

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INTRODUCTION

Ensuring adequate funding is crucial for banking institutions to effectively fulfill their functions and achieve their objectives. Sufficient funds enable banks to facilitate various financial activities and operations more seamlessly (Jakab & Kumhof, 2015). The role of banking in a financial institution is undoubtedly fraught with credit problems (Abouraia & Othman, 2017). Especially since the COVID-19 pandemic reached Indonesia in March 2020, many banking institutions have encountered challenges in the credit sector, commonly referred to as bad credit. In contrast to past macroeconomic and financial crises, the COVID-19 pandemic represents a public health shock that has significantly impacted economies worldwide (Kryzanowski, et al., 2022; Bacchiocchi et al., 2022).

Amidst the economic and social upheaval triggered by the pandemic, the banking sector is anticipated to face repercussions due to delayed company operations (Marcu, 2021). To support businesses during these challenging times, measures such as easing interest payment activities have been proposed (Wu, et.al., (2022). This is in response to a government policy implementing the PSBB (Large-Scale Social Restrictions), impacting the closure of schools, offices, and malls (Muhyiddin & Nugroho, 2021).

The banking sector has been deeply affected by reduced liquidity and increased risk (Saada, 2018). The things above caused non-performing loans to increase. The issue of Non-Performing Loans (NPLs) in the overall economy raises concerns about the predictability of future developments and the potential use of macroeconomic and macro-financial variables as leading indicators for NPL trends (Staehr & Uusküla, 2021).

High Non-Performing Loans (NPLs) can impact credit supply through various channels. Firstly, banks are constrained by prudential regulations mandating sufficient capital, and a high NPL ratio would elevate risk weights for bank loan portfolios when calculating regulatory capital adequacy (Accornero, et.al., 2017).

Secondly, an elevated NPL level diminishes bank profitability, restricting the availability of capital resources for lending purposes (Balgova, et al., 2018).

According to data from the Financial Services Authority (OJK), the gross Non-Performing Loan (NPL) ratio for banks in March 2021 rose to 3.17 percent, up from 2.77 percent in March 2020. The increase in the non-performing loan ratio within the banking sector can be attributed to the economic downturn resulting from the implementation of social restrictions to control the pandemic. This situation led to many borrowers, including both micro and macro-scale entrepreneurs, experiencing reduced production or even ceasing their business operations, impacting their ability to repay loans and causing an increase in bad loans for banks (Briceño and Perote 2020; Ratten 2020).

Figure 1 shows that Non-Performing Loans (NPL) within Core Capital Bank Group 4 in Indonesia show a consistent monthly increase. This surge can be attributed to the impact of the COVID-19 virus on the Indonesian state, leading to a paralysis of economic activities as many employees were compelled to be laid off. Entrepreneurs were compelled to shutter their businesses due to insufficient income to cover their expenses (Muqsith et al., 2021; Megasari et al., 2021).

This research is further supported by previous studies. Specifically, Ciurel and Stoica (2020) examined a significant relationship between macroeconomic indicators, bank rate factors, and non-performing loan ratios in Turkey. Ghosh (2015) conducted the only known study investigating the issue of Non-Performing Loans (NPLs) in the world's largest economy. Their research delves into the impact of regional banking and economic conditions on NPLs, utilizing aggregated banking data at the state level.

Konstantakis et al. (2016) sought to elucidate the determining factors of non-performing loans in the Greek banking sector, aligning with international evidence. They found that macroeconomic and financial factors

significantly influence non-performing loans in the country. Additionally, Caglayan and Xu (2018) discovered that economic policy uncertainty reduces credit availability, increasing credit risk and leading to higher loan loss provisions.
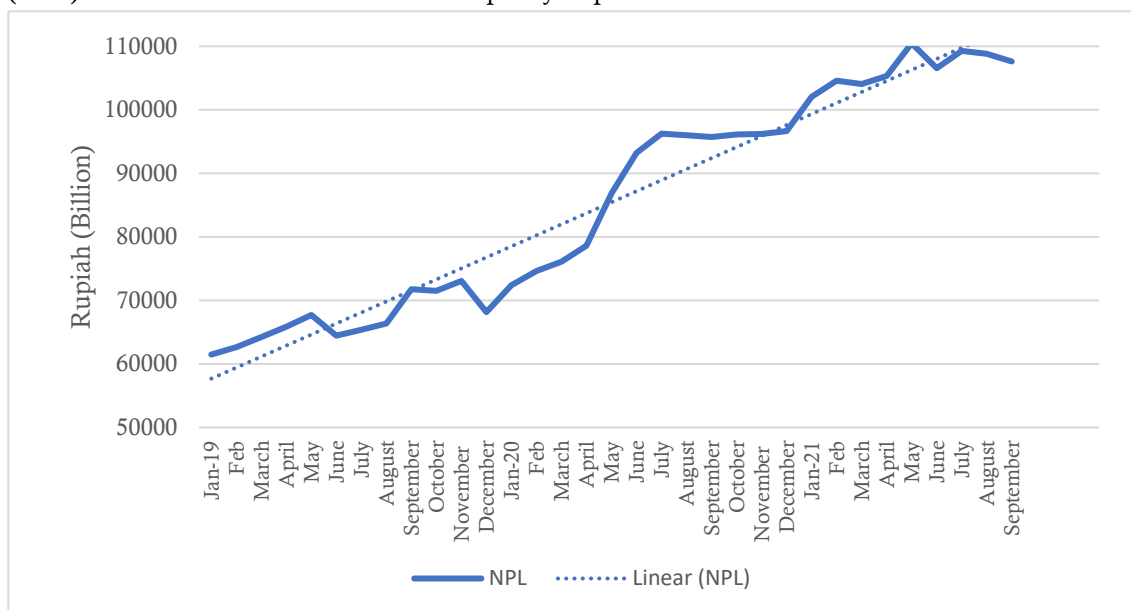

Figure 1. Non-Performing Loan Trend
Source: Banking Statistics Indonesian Financial Services Authority , 2020

According to the findings of Beck and Keil (2022), US banks with greater geographical exposure to the COVID-19 pandemic and associated lockdown measures have witnessed an increase in non-performing loans (NPLs).

Several other studies also examine developing countries. Research by Ozili (2019) aims to determine the effect of financial developments on non-performing loans (NPLs) using panel data from 96 countries, especially in developing countries. The analysis technique uses panel data regression. The findings show that financial developments, measured as the presence of foreign banks and financial intermediation, are positively associated with NPLs. Also, bank efficiency, loan loss coverage ratio, competition, and banking system stability are inversely related to NPLs, while NPLs are positively related to banking crises and bank concentration. Pay (2019) explores the macroeconomic, institutional, and bank-specific factors behind non-performing banking loans as indicators of the functioning of the banking sector in emerging market economies during the period 2000-2013 using GMM dynamic panel data

estimator system. The dynamic panel regression analysis results show that economic growth, inflation, economic freedom (institutional development), return on assets and equity, regulatory capital against risk-weighted assets, and non-interest income on total income negatively affect non-performing loans.

In contrast, unemployment, public debt, growth credit, lagging non-performing credit scores, cost-to-income ratio, and financial crisis affect non-performing loans positively. Research Yüksel (2017) analyzes the bank credit risk determinants in developing countries after the economic crisis. In this sphere, the Turkish banking sector is tried to be analyzed. In this study, 23 Turkish deposit banks were analyzed.

Moreover, the probit model was applied to annual data from 24 Turkish deposit banks covering 2004 to 2014. The pertinent data were sourced from the Association of Turkish Banks, OECD, and World Bank. The non-performing loan ratio serves as the dependent variable, reflecting credit risk. Meanwhile, the model incorporates nine explanatory variables to ascertain the determinants of non-performing

loans. Zheng et al. (2020) examine the influence of industry-specific and macroeconomic determinants on non-performing loans (NPLs) across Bangladesh's banking system. We analyzed 1979 to 2018 with the Autoregressive Distribution Lag (ARDL) model. We examined the robustness of the results in the Vector Error Correction (VEC) model. The results of this study show that industry-specific and macroeconomic factors affect NPL significantly.

Building on the phenomena and empirical research outlined, this study aims to identify the factors influencing Non-Performing Loans in the Indonesian Banking Industry Bank Group, specifically based on Core Capital (KBMI) 4, before and during the COVID-19 Pandemic. The study spans from January 2019 to September 2021. It utilizes variables such as non-performing loan (NPL), net interest margin (NIM), loan-to-deposit ratio (LDR), Bank Indonesia Rate (BI Rate), and the dummy variable for COVID-19. Given the context provided, the hypothesis posits that NIM, LDR, BI Rate, and the Dummy COVID-19 collectively impact NPL in the short and long term.

RESEARCH METHODS

This study utilizes secondary data from reputable sources such as the Financial Services Authority (OJK), Bank Indonesia, and Worldometer. The variables considered in this research include Net Interest Margin (NIM), Loan Deposit Ratio (LDR), and the Bank Indonesia Rate. The data covered a time series from January 2019 to September 2021 and was processed using the Eviews 10 application program. The data analysis technique employed in this study is the error correction model (ECM) regression analysis.

Table 1. Operational Variables

Variable	Notation	Variable Description	Formula	Data Sources
Non-Performing Loan	NPL	Loans that are grouped into a level include current loans, doubtful loans, and finally, bad loans.	(Non-performing loans)/ (Total Credits) x 100%	Financial Services Authority (OJK) Indonesia
Net Interest Margin	NIM	The ratio used by banks in measuring how much interest profit is earned by banks in managing their operations.	(Net Interest)/ (Average Productive Assets) x 100%	Financial Services Authority (OJK) Indonesia
Loan to Deposit Ratio	LDR	The ratio between total bank loans and total deposits.	(Total Credit)/(DPK + Securities issued by the bank) x 100%	Financial Services Authority (OJK) Indonesia
Bank Indonesia Rate	BI Rate	Bank Indonesia sets the benchmark interest rate through the monthly Board of Governors Meeting.		Bank Indonesia
Dummy Covid-19	DCOV	Dummy before and during COVID-19		Worldometer

Source: OJK, Bank Indonesia, Worldometer, 2021 (Processed)

The regression model used for analysis is presented :

Short Term Equation :

$$\Delta LN\_NPL = \beta_0 + \beta_1 \Delta NIM_t + \beta_2 \Delta LDR_t + \beta_3 \Delta BI\ Rate_t + \beta_4 DCOV_t + ECT \quad ....(1)$$

Long Term Equation :

$$LN\_NPL_t = \beta_0 + \beta_1 NIM_t + \beta_2 LDR_t + \beta_3 BI\ Rate_t + \beta_4 DDCOV_t + \mu_t \quad ....(2)$$

Where, NPL is Non-Performing Loans; NIM is Net Interest Margins; LDR is Loan to Deposit Ratio; BI Rate is Interest Rate (BI rate); DCOV is Dummy COVID-19; β0 is Constant, β1-β4 is Coefficient of Regression direction (estimator for variable X); t is period; ECT is Error Correction Term; µt is residual.

RESULTS AND DISCUSSION

Based on Figure 2, NPL trends tended to fluctuate before the pandemic, increasing and decreasing depending on economic, industry, and banking policy factors. At the same time, NIM also fluctuates, but it is generally stable within a specific range. The relationship between NPLs and NIM before COVID-19 could be influenced by factors such as economic growth, credit quality, and risk management strategies adopted by banks (Erdas & Ezanoglu, 2022; Andana & Baskoro, 2022.
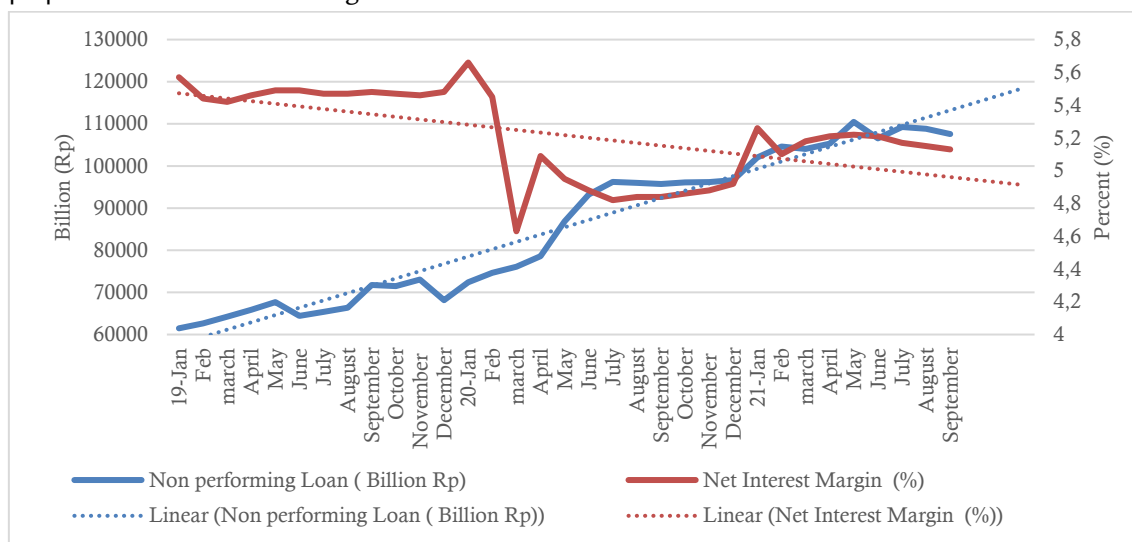

Figure 2. Variable Trend of Net Interest Margin and Non-Performing Loan
Source: Banking Statistics Indonesian Financial Services Authority, 2022 (Processed)

During the COVID-19 pandemic, the relationship between NPL and NIM Trends has become more complex and has been affected by the direct impact of this global health crisis. In many cases, NPLs have increased significantly during the pandemic. This is due to decreased purchasing power, business sector disruptions, and economic instability resulting from restrictive and lockdown policies (Ahamed, 2021; Saif et al., 2021). On the other hand, NIM has also changed the pandemic. Banks face pressure on their profit margins due to lower interest rates and declining business activity (Claessens et al., 2018). However, interest rate changes made by central banks to stimulate the economy may also affect the NIM. In the context of the COVID-19 pandemic, the relationship between NPL and NIM can become more complex. The decline in business revenue and financial difficulties specific sectors face can lead to bad debts that impact NPLs (Tripodi, 2013). Meanwhile, a reduction in interest rates may affect bank interest income and impact NIM.

From the findings presented in Figure 3, it can be observed that there is a correlation between the trends of Non-Performing Loan (NPL) and Loan to Deposit Ratio (LDR) variables both before and during the COVID-19

pandemic. Before the pandemic, both NPLs and LDRs experienced small but generally stable fluctuations. However, there have been significant changes in both variables during the pandemic. First, NPLs have increased significantly during the pandemic. The decline in business activities, the decline in people's purchasing power, and the economic instability caused by the pandemic contributed to the increase in NPLs (Ozili, 2021). It can be seen that NPLs experienced a significant increase in May 2020 and May 2021. This indicates pressure on the credit quality provided by banks during the pandemic. LDR has also experienced significant fluctuations during the pandemic. A decline in LDR may reflect a decline in demand for credit from the public during the crisis (Dasgupta, 2020). There is a significant decrease in LDR in certain months, such as June 2020 and June 2021. This indicates a decrease in deposits or an increase in liquidity higher than the demand for credit.
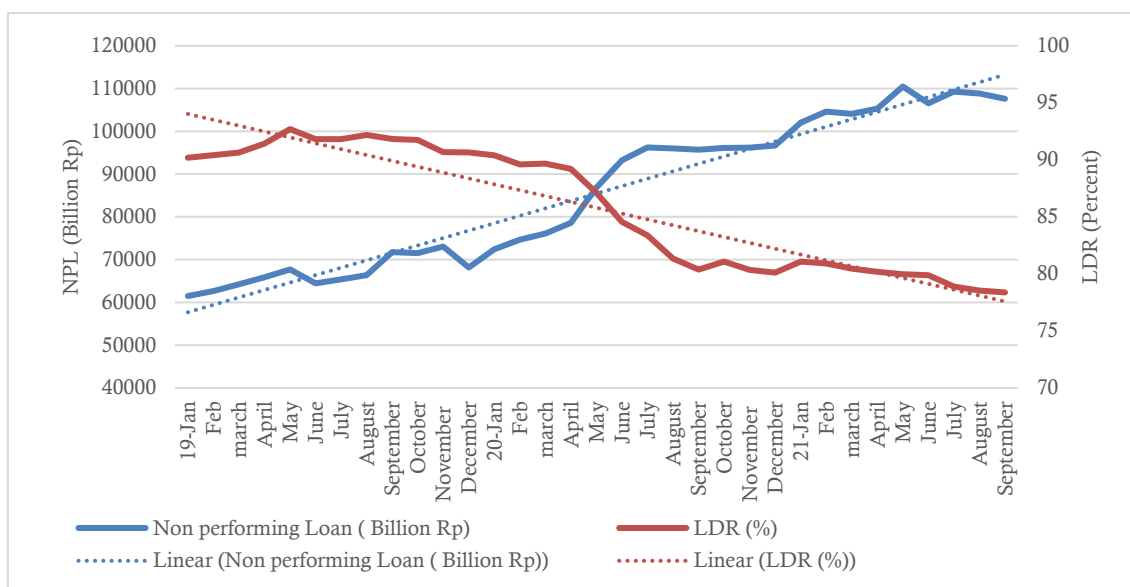

Figure 3. Variable Trend of Loan to Deposit Ratio and Non-Performing Loan
Source: Banking Statistics Indonesian Financial Services Authority 2022, Processed

NPL and LDR Trends during the COVID-19 pandemic reflect the negative impact of the pandemic on the banking sector. An increase in NPLs indicates higher credit risk, while a decrease in LDRs reflects challenges in allocating credit funds efficiently (Widyastuti et al., 2017). Therefore, effective risk management and careful monitoring of NPLs and LDRs are essential for banks facing challenging economic conditions due to the pandemic (Riani, 2021). In addition, appropriate policies and interventions from regulators and governments are also needed to maintain the stability of the banking sector during this time of crisis.

Before the pandemic, NPLs remained stable at a high level and did not see significant changes from month to month. This may indicate that the bank's credit quality in that period was relatively poor and requires further attention (Alnabulsi et al., 2022). At the same time, the Interest Rate remains constant at 6%, indicating stability in monetary policy. However, during the COVID-19 pandemic, there has been a dramatic change in the trends of the two variables. In September 2020, NPLs experienced a significant increase, reaching much higher levels than previous months. This increase indicates a negative impact of the pandemic on the quality of credit banks provide. Factors such as declining incomes, declining people's purchasing power, and economic instability can be the leading causes of NPL increases during this period (Huang et al., 2021).
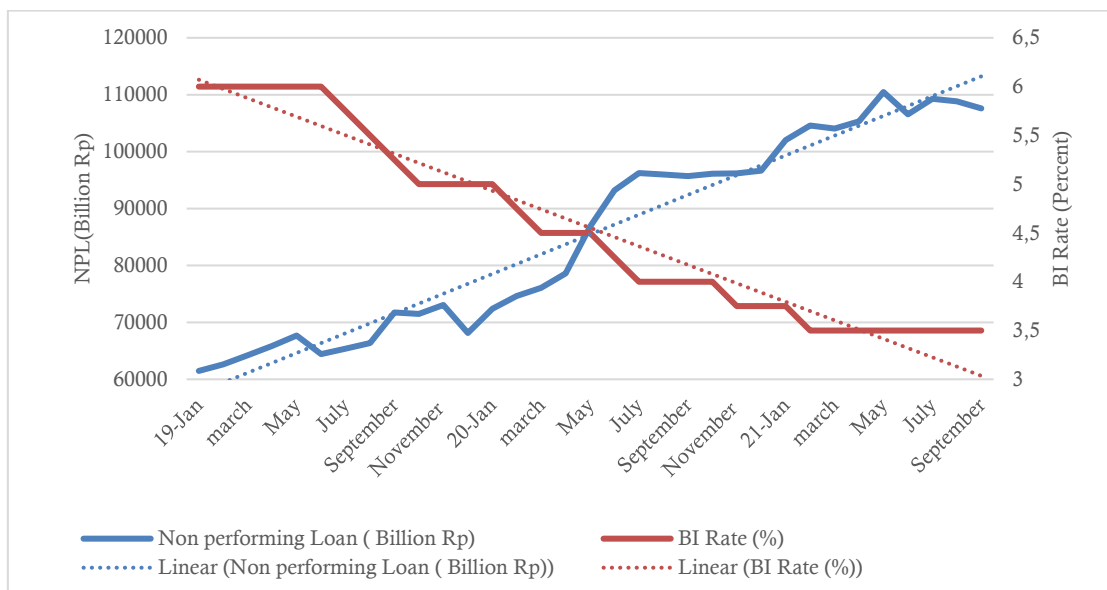
Figure 4. Variable Trend of Interest Rate and Non-Performing Loan
Source: Banking Statistics Indonesian Financial Services Authority, 2022 (Processed)

In addition, there has been a significant change in the Interest Rate during the pandemic. In July 2020, there was a reduction in interest rates to 5.75%, which is likely a response from monetary authorities to stimulate economic growth and ease the burden of borrowing for debtors during times of crisis. This interest rate reduction can stimulate the business sector to borrow and invest capital and encourage people to take credit (Felipe & Fullwiler, 2020; Fernández et al., 2021). However, it should be noted that lowering interest rates can also have a negative impact, such as declining bank interest income. Furthermore, the Interest Rate declined to 3.5% in February 2021. This continued reduction in interest rates can affect people's decisions to take loans. On the one hand, low-interest rates can encourage lending activities, reduce the burden of interest payments, and increase consumer purchasing power (Summers, 2015). However, on the other hand, a reduction in interest rates can negatively affect banks' interest income, affecting their profitability.

Overall, the COVID-19 pandemic has significantly impacted NPL and Interest Rate Trends. The increase in NPLs indicates an increase in credit risk during the crisis, while interest rate reduction is one of the monetary policies used to overcome the economic impact caused by the pandemic. In this situation, banks and monetary authorities must implement sound risk management and appropriate monetary policy to maintain financial sector stability and promote sustainable economic recovery.

Table 2 provides an overview of some relevant statistics related to the observed variables. The mean, median, maximum, and minimum values of Non-Performing Loans (NPL) illustrate poor credit quality in the banking sector. The average NPL of 85453.18 indicates an overall level of poor credit quality. In contrast, a nearly identical median value indicates variation in the distribution of NPLs. The maximum value of NPL reached 110470.0, which indicates a large number of non-current loans. The minimum NPL value of 61477.00 indicates that there are also better-quality loans. A high NPL standard deviation (17246.72) indicates a significant variation in the data. It could indicate a higher level of risk in a bank's loan portfolio.

Table 2. Statistics Descriptive

	NPL	NIM	LDR	BI RATE
Mean	85453.18	5.216667	85.80000	4.553030
Median	86841.00	5.210000	87.11000	4.500000
Maximum	110470.0	5.660000	92.69000	6.000000
Minimum	61477.00	4.630000	78.37000	3.500000
Std. Dev.	17246.72	0.274519	5.336832	0.941154
Skewness	0.038332	-0.343859	-0.083410	0.374773
Observations	33	33	33	33

Source: Data Processed, 2022

Meanwhile, for Net Interest Margin (NIM), figures such as the average and standard deviation provide an overview of the performance of a bank's interest margin. The average NIM of 5.216667 indicates the interest margin earned by the bank from its operational activities. A low standard deviation (0.274519) indicates consistency in the interest margin earned by banks. The figures in the table also include the Loan to Deposit ratio and Interest rate. The Loan to Deposit ratio describes the ratio of bank loans to customer funds. The average Loan to Deposit ratio is 85.80000, with the variation shown by the standard deviation of 5.336832. The interest rate describes the interest rate applied by the bank. The average interest rate is 4.553030, with the variation shown by the standard deviation of 0.941154.

Table 3. Unit Root Test

ADF variable	Levels		Level 1	
	t-statistics	Prob	t-statistics	Prob
LOGNPL	-0.90126	0.7748	-5.33410	0.0001***
NIM	-2.27241	0.1866	-7.34009	0.0000***
LDR	-0.32719	0.9096	-3.56013	0.0128***
BIRATE	-1.60496	0.4678	-4.24264	0.0024***
DCOV	-1.13933	0.6877	-5.56776	0.0001***

Note: *** statistical significance at 1%

Source: Data Processed, 2022

Table 4. Cointegration Test

Hypothesized	Eigenvalue	Trace Statistics	Critical Values	Prob
None *	0.771369	92.10595	69.81889	0.0003***
At most 1	0.600454	46.36098	47.85613	0.0686*
At most 2	0.300637	17.92077	29.79707	0.5719
At most 3	0.152395	6.835625	15.49471	0.5968
At most 4	0.053670	1.710068	3.841466	0.1910

Note: ***,**,* statistical significance at 1%, 5% and 10%.

Source: Data Processed, 2022

The results presented in Table 4 indicate that the Johansen cointegration test yielded a trace statistic value of 92.10, which exceeds the critical value of α=5% at 69.81. Additionally, the probability value of 0.000 is less than α=5%, leading to the rejection of the null hypothesis (H0). These findings suggest a long-term relationship (cointegration) among the variables in the dataset.

Table 5. ECM Model Estimation

Variable	Coefficient	Std. Error	t-Statistics	Prob
C	0.0042	0.0064	0.6511	0.5207
D(NIM)	0.0361	0.0430	0.8396	0.4088
D(LDR)	-0.0130	0.0061	-2.1040	0.0452**
D(BIRATE)	-0.1088	0.0467	-2.3305	0.0278**
D(DCOV)	-0.0166	0.0447	0.3716	0.0132**
ECT(-1)	-0.7083	0.1630	-4.3447	0.0002***
R-Squared	0.4803	F-statistics	4.8062	
Adjusted R-squared	0.3803	Prob(F-statistic)	0.0030	

Note: ***,** statistical significance at 1% and 5%

Source: Data Processed, 2022

The short-term ECM model was estimated using the least squares method, and the results of the estimation are as follows:

$$\Delta LOGNPL = 0.004219 + 0.036165\ \Delta NIM - 0.013031\ \Delta LDR - 0.108899\ \Delta BIRATE + 0.016633 \Delta DCOV - 0.708300\ ECT \dots(3)$$

While the estimation results when there is an impact of the dummy variable are as follows:

$$\Delta LOGNPL = 0.020852 + 0.036165\ \Delta NIM - 0.013031\ \Delta LDR - 0.108899\ \Delta BIRATE - 0.708300\ ECT \dots(4)$$

Based on Table 5, Net Interest Margin and DCOV variables positively influence the t-statistic value of 0.371646 with a probability of 0.0132 <0.05. When the dummy was inserted, it turned out that the Covid situation increased the NPL by 0.016633. Based on these results, the magnitude of the constant during a pandemic (0.004219 + 0.016633) is 0.020852. Suppose the independent variables NIM, LDR, BIRATE, and dummy covid are constant or zero. In that case, the NPL during a pandemic is 0.020852.

Meanwhile, the Loan to Deposit Ratio variable and the BI Rate have a negative influence. It can be seen that the variables LDR, BI rate, and DCOV have a probability value of $<\alpha$ 5%; this means that these variables are significant to the dependent variable, namely Non-Performing Loans. Whereas the NIM variable has a probability value of $> \alpha$ 5%, the NIM variable is insignificant to the Non-Performing Loan variable.

The estimation equation in the long term, both before and after considering the dummy impact, indicates a positive relationship between the Net Interest Margin and DCOV variables with NPL. This is supported by a t-statistic value of 2.317343 and a probability of 0.0280, which is less than the significance level of 0.05. When the dummy variable was included, it turned out that the Covid situation could increase the NPL by (12.444 + 0,107373), equal to 12.551373. If the independent variables NIM, LDR, BIRATE, and Dummy Covid are constant or zero, then the NPL during a pandemic is 12.551373. Meanwhile, the LDR and BI Rate variables have a negative effect on NPL for all significant variables at α = 5%.

Table 6. Long Term Estimation

Variable	Coefficient	Std. Error	t-Statistics	Prob
C	12.4441	0.4224	29.4540	0.0000
NIM	0.1015	0.0484	2.0970	0.0451**
LDR	-0.0141	0.0030	-4.6757	0.0001***
BIRATE	-0.1060	0.0186	-5.6934	0.0000***
DCOV	0.1073	0.0463	2.3173	0.0280**
R-Squared	0.9773	F-statistics	301.411	
Adjusted R-squared	0.9740	Prob(F-statistic)	0.0000	

Note: ***,** statistical significance at 1% and 5%

Source: Data Processed, 2022

In the long-term model, utilizing the Least Squares method, the obtained estimations are as follows:

LOGNPL = 12.444 + 0.101556 NIM − 0.01419 LDR − 0.106028 BIRATE + 0.107373 DCOV..(5)

The long-term estimation results when there is a dummy impact are as follows:

LOGNPL= 12.551373 + 0.101556 NIM − 0.01419 LDR − 0.106028 BIRATE .....(6)

The t-test results indicate that the Net Interest Margin positively affects the Non-Performing Loan (NPL) in the short term, but the effect is not statistically significant. However, the NIM has a positive and statistically significant impact on the NPL in the long term. This means that if the NIM value in a bank is high, it indicates a significant difference between the interest charged to the customer (the debtor) for loans and the interest earned on savings/deposits obtained by the customer. Of course, this also has an impact on increasing bad loans. This research was supported by researchers Ranjan and Dhal (2003) and Umar and Sun (2018).

The t-test results indicate that the Loan Deposit Ratio (LDR) has a negative and statistically significant effect on the Non-Performing Loan (NPL) ratio in the short and long term. This suggests that an increase in the LDR, representing a higher amount of credit extended by the bank, leads to a decrease in the NPL ratio. This relationship can be explained by the fact that the NPL ratio measures the proportion of non-performing loans concerning the total credit provided by the bank, and a higher LDR indicates a higher level of collectability and lower credit risk. Researchers supported this research (Makri et al., 2014; Bolat and Isik, 2016; Saba et al., 2012).

The t-test results indicate that the interest rate (BI Rate) has a negative and statistically significant effect in the short and long term. Banks do not immediately adjust interest rate changes to BI Rate changes. This research was supported by researchers (2012) and Tripodi (2013). However, this research does not support

the research conducted by Adeola and Ikpesu (2017), Hasanah and Septiarini (2020), and Tarchouna et al. (2017). This is because an increase in interest rates increases the cost of credit taken, making it more difficult to pay, and consequently, Non-Performing Loans experience growth.

The t-test results for both the short-term and long-term analyses show a positive and statistically significant relationship. Specifically, in the short term, the t-statistic value is 0.371646 with a probability of 0.0132, less than the significance level of 0.05. This suggests that there is a significant effect in the short term. Before the dummy was inserted, the NPL was only 0.004219. In contrast, when the dummy was inserted, it turned out that the Covid-19 situation could increase the NPL by 0.016633. based on these results, the magnitude of the constant during the pandemic (0.004219 + 0.016633) is 0.020852. Suppose the independent variables NIM, LDR, BIRATE, and dummy Covid are constant or zero. In that case, the NPL during the pandemic is 0.020852. The influence of the crisis dummy is in line with research by Karadima and Louri (2020) and Partovi and Matousek (2019).

In the long term, the t-test results indicate that the Dummy Covid variable has a t-statistic value of 2.371343 with a probability of 0.0280, lower than the significance level of 0.05. This suggests a significant effect of the Dummy Covid variable in the long term. Before the dummy was inserted, the NPL was only 12.444. In contrast, when the dummy was inserted, it turned out that the Covid situation could increase the NPL by (12,444 + 0.107373), which was 12.551373. Suppose the independent variables NIM, LDR, BIRATE, and dummy Covid are constant or zero. In that case, the NPL during the pandemic is 12.551373. This can occur because the business sector, such as MSMEs, loses profits because people's purchasing power decreases due to the absence of income for consumer households, resulting in companies or business sectors making fewer sales and the country's overall economic output decreasing. As a result, debtors who have loans to banks cannot fulfill their loan repayment obligations. This causes bad credit,

and the NPL ratio of banks in Indonesia increases. The ongoing increase in NPL ratios renders banks ineffective. It leads to losses due to the absence of funds returning from debtors to banks. Therefore, banks should be more selective in extending their credit so that the risk of non-performing loans does not increase significantly and is more controlled.

CONCLUSION

Banking NPLs experienced a significant increase during the Covid-19 pandemic. This can happen because the level of people's purchasing power has decreased due to policies implemented by the government during the pandemic, which have an impact on the business sector, such as MSMEs, which have lost profits. After all, people's purchasing power has decreased due to no household income. The government can provide economic stimulus to support the business sector, especially Micro, Small, and Medium Enterprises (MSMEs). This stimulus includes financial assistance, tax incentives, or loan interest subsidies. This helps MSMEs to survive and prevents bad credit from occurring. Banks can provide payment relief to debtors affected by the pandemic. This relief can be in the form of loan restructuring by extending the payment term, reducing interest rates, or providing a moratorium on principal and interest payments. This step provides space for debtors experiencing financial difficulties due to the pandemic. Banks and financial institutions must improve their supervision and risk management during the pandemic. This includes more careful credit evaluation, close monitoring of loan portfolios, and quick action in identifying potential bad loans. With good risk management, banks can take the necessary preventive steps to reduce the risk of bad credit. Collaboration between the government, banks, and other financial institutions needs to deal with bad loans during the pandemic. The government can provide supportive policies and regulations. In contrast, banks and financial institutions can provide solutions and assistance according to the needs of debtors.

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