



Comparison of Non-Performing Loans Before and During Covid-19 at Traditional Commercial Banks in Indonesia that are registered with the Financial Services Authority

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Abstract. During the Covid-19 period, banks tried to carry out their intermediation function by optimally distributing credit, impacting non-performing loans' risk. This study aimed to examine and analyze the differences in non-performing loans before Covid-19 (2018-2019) and during Covid-19 (2020-2021). The study's sample comprises conventional commercial banks registered with the Financial Services Authority. For the case in this study, intentional sampling was used to collect data from up to 12 banks. The analytical approach employs a paired sample t-test and is comparative analytical. The study results demonstrate substantial changes in non-performing loans between before and during Covid-19, demonstrating that the Covid-19 pandemic influences the likelihood of non-performing loans.

Keywords: Covid-19, Credit, Non-Performing Loan, Conventional Commercial Bank

1 INTRODUCTION

A new disease known as Covid-19 (Coronavirus disease 2019) is brought on by the Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-Cov-2) virus, formerly known as Novel Coronavirus (2019-nCov) (Rahayu et al., 2020). The covid-19 pandemic hasn't been contained since it was first reported in Indonesia on March 2, 2020. According to Financial Services Authority Regulation Number 48/POJK.03/2020 of 2020 [1], the spread of Covid-19 has a direct or indirect impact on how well debtors perform and can meet credit payment obligations, which raises the risk of credit issues that may disrupt banking operations and the stability of the financial system, which may have an impact on economic growth. For this reason, an economic stimulus strategy is required as a countercyclical effect of the proliferation of Covid-19 to maintain the financial system's stability, encourage the optimization of bank intermediation to maintain the financial system's stability, promote the optimization of bank intermediation functions, and support economic growth, an economic stimulus strategy is necessary as a countercyclical consequence of the spread of Covid-19. Under the countercyclical policy, creditors affected by the Covid-19 distance receive special

affected by the Covid-19 distance receive special treatment, such as credit restructuring of several credit debts or bank funding up to a certain level.

Banking performance began to recover in the first semester of 2021 when almost all large banks recorded profit growth. In terms of credit, only Bank Mandiri, BRI, BNI, BTN, Permata Bank, and OCBC NISP recorded credit growth above industry performance. Bank Mandiri itself recorded a positive performance in asset growth of 16.26% (YoY) from Rp. 1,359.44 trillion to Rp. 1,580.52 trillion as of June 2021. Meanwhile, Bank Mandiri's credit increased by 2.43% (YoY) from Rp. 871.66 trillion to Rp 892.80 trillion in the first half of 2021. According to OJK estimates, bank credit will continue to grow by around 5 percent to 6 percent throughout 2021 in line with the vaccination process. The growth of commercial banks' non-performing loans (NPL) increased yearly, namely in 2018 at 2.37 percent, 2019 at 2.60 percent, 2020 at 3.03 percent, and 2021 at 3.22 percent. NPL before Covid-19 was lower than NPL during Covid-19. This means that the risk of bank non-performing loans is higher during Covid-19, even though the NPL ratio is still categorized as healthy because it is below 5%.

This study focuses on banking sector companies, especially conventional commercial banks, because conventional commercial banks have rapid growth compared to Islamic commercial banks [2]. Conventional banking sector businesses do not involve customers in responsibility for the risks that may occur. This is different from Islamic commercial banks; profit and loss will be shared according to the agreement, so conventional commercial banks are more susceptible to credit risk. Moreover, the present Covid-19 pandemic affects credit distribution, raising bank credit risk due to a decline in debtor performance and capacity to repay credit or finance obligations. Increasing credit risk can impair banking operations and the financial system's stability, which impacts economic growth.

Research examined the conventional banking book IV performance prior to and following the Covid-19 pandemic using the ratio of productive asset quality. (NPL) [3]. In contrast, research found no appreciable differences in Indonesian banks' NPL ratios before and during the Covid-19 pandemic [4].

Researchers are interested in learning more about the differences in non-performing loans from conventional commercial banks during Covid-19 by using the non-performing loan ratio indicator in the period before and during Covid-19 was implemented, mainly when the policy was imposed on the implementation of restrictions on community activities and vaccination policies. This is because the results of these studies differ, and this has piqued researchers' interest.

Ross first coined the Signaling theory (1977), which states that managers will be motivated to convey helpful information about their company to an uninformed public. Signal theory assumes that good financial statements indicate that the company is operating well. The implication of signal theory in this study is that signal theory can explain the existence of banks as financial institutions that can be trusted to convey

information about banking conditions through financial reports so that customers, shareholders, and potential investors can assess how banking credit conditions are, whether banks experience non-performing credit risk and how is the level of banking liquidity by utilizing financial ratios such as the NPL and LDR ratios so that customers can entrust their funds to banks to be managed properly. Potential investors can make investment decisions in these banks, which will impact increasing profits and investment returns.

The Financial Services Authority and Law Number 10 of 1998 define conventional commercial banks as institutions that engage in routine business operations and offer payment-related services, including overseas branches of domestic institutions. Conventional commercial banks carry out their operational activities by raising funds from demand deposits, deposits, and savings deposits, providing credit based on national and international agreements, and applying the pricing method by the interest rate issued by Bank Indonesia.

A non-performing loan is a ratio used to measure the risk of bad loans [5]. The higher the NPL ratio, the higher the risk of non-performing loans that the bank will experience, which means it can harm the bank, conversely the lower the value of the NPL ratio, the lower the risk of non-performing loans that will be experienced by the bank which means it can benefit the bank [6]. Financial Services Authority Regulation Number 4/POJK.03/2016 regarding the Assessment of the Soundness of Commercial Banks limits the value of the NPL ratio to not exceeding 5%.

2 METHODOLOGY

This study used descriptive and comparative methods with a quantitative research approach. The method was employed because, in this study, the researchers used indicators of non-performing loan ratio to compare and test the variation in average non-performing loans between banks based on two distinct periods, namely the phenomenon before Covid-19 (in 2018 and 2019) and during Covid-19 (in 2020 and 2021). Conventional commercial banks registered with the Financial Services Authority for the calendar years 2018 through 2021 make up the population of this study. The researcher in this study used purposeful sampling to choose the research sample. Utilizing the purposive sampling method shown in Table 1. Twelve banks made up the study's sample, as shown below.

Table 1. The Method Used to Determine Research Samples

No.	Criteria	Number of Companies
1.	For 2019 to 2021, conventional commercial banks with Financial Services Authority registration.	95
2.	Conventional Commercial Banks which are not included as state-owned commercial banks and foreign exchange BUSN	(66)
3.	State-owned conventional commercial banks and foreign exchange BUSNs that do not publish complete financial reports in quarters 1, 2, 3, and 4 for 2018 to 2021. The research observation period within the study period (12 x 16 periods) was employed as the sample in this study.	(17) 12 192

Source: Saumur, et al: processed data, 2022

In this examination, secondary data types were used in the research. This study examined the quarterly financial statements for conventional commercial banks from 2018 through 2021 registered with the Financial Services Authority (OJK) as secondary data. These were acquired from the www.ojk.go.id page of the official OJK website. The researchers in this study employed literature, documentation, and internet studies to gather data. A ratio scale is utilized as the measuring scale for computing the NPL using the formula [5][7]:

$$NPL = \frac{\text{Total Non-Performing Loans}}{\text{Total All Credits}} \times 100 \dots (1)$$

Researchers employed a descriptive methodology for this investigation, using descriptive statistics for analysis. This study used descriptive analysis to summarize the data on non-performing loans (NPL). Data presentation through tables, mode, median, mean, decile, percentile, data distribution calculation by average analysis and standard deviation, and a percentage calculation are all included in the information provided by descriptive statistics [8][9].

This study compares the average non-performing loan at traditional commercial banks registered with the Financial Services Authority before and after Covid-19, using the paired sample t-test to assess the null hypothesis. Based on the statement of [10], the average of two groups of related or paired data samples was compared using the paired sample t-test to determine whether there were any differences or similarities [11]. The study's hypotheses are as follows:

H0: Before and after COVID-19, non-performing loans at conventional commercial banks were the same.

Ha: Traditional commercial banks' non-performing loans varied before and after COVID-19.

3 RESULTS AND DISCUSSION

Twelve conventional commercial banks registered with the Financial Services Commission provided up to 96 samples of observation data for the descriptive statistical test used in this study. Authority during the 2018–2019 and 2020–2021 Covid-19 periods (12 8 = 96 data samples). The values for the minimum, maximum, mean, and standard deviation and the results of the descriptive statistical tests are shown in Table 2.

Table 2. Statistics, Descriptive

<i>Descriptive Statistics</i>					
	N	Min	Max	Mean	Std. Dev
NPL Before Covid-19	96	1.26	5.63	2.7609	1.07975
NPL During Covid-19	96	.08	9.56	3.3540	1.55098
Valid N (<i>listwise</i>)	96				

Source: Output processed data (2022)

Table 2. The above shows that the NPL had a minimum value before Covid-19 of 1.26 percent in the first quarter of Bank UOB Indonesia for the 2018 period and the maximum value before Covid-19 of 5.63 percent in the fourth quarter of Bank QNB Indonesia for the 2019 period. Meanwhile, the minimum NPL value during Covid-19 was 0.08 percent in the fourth quarter of QNB Indonesia Bank for the 2021 period, and the maximum value during Covid-19 was 9.56 percent in the 2nd quarter of QNB Indonesia Bank for the 2020 period. In light of this, it can be said that Bank QNB Indonesia's NPL ratio fluctuated throughout the second quarter of 2019. Non-performing loans were a risk for Bank QNB Indonesia. When things started to improve in the fourth quarter of 2021, the NPL ratio value—which was 0.08 percent, or less than 5 percent—was considered healthy. The NPL ratio is deemed healthy if it is less than 5%, per Financial Services Authority rule number 4/POJK.03/2016.

Before Covid-19, the average NPL value was 2.7609 from 96 observation samples; during Covid-19, the average NPL value was 3.3540 from 96 observation samples. The standard deviation of the NPL before Covid-19 was 1.07975 and 1.55098 during Covid-19, respectively, demonstrating that the average NPL value during Covid-19 was more significant than the average NPL value before Covid-19. The results of the average normality test of the two paired samples in this study were then utilized to assess the normality of the 12-sample data on the average NPL before Covid-19 (2018-2019) and Covid-19 because customarily distributed data are required to perform the paired sample t-test (2020-2021).

Researchers used the Shapiro-Wilk test to determine the study's normalcy. Table 3 in this study's results of the normalcy test shows the outcomes.

Table 3. Results of the Normality Test
Test of Normality

	<i>Kolmogoro</i>		<i>Shapiro-Wilk</i>			
	<i>v-Smirnov^a</i>		<i>Statistic</i>			
	<i>Statistic</i>	<i>Df</i>	<i>Sig.</i>	<i>stic</i>	<i>df</i>	<i>Sig.</i>
NPL Before Covid-19	.200	12	.200*	.927	12	.346
NPL During Covid- 19	.147	12	.200*	.975	12	.955

Source: Output processed data (2022)

According to Table 3 above, the value of Sig. The NPL before Covid-19 was 0.346, and the NPL during Covid-19 was 0.955, which suggests that the matter is more than the probability value of 0.05 and that the average NPL data is usually distributed. If the research data samples were regularly distributed, the paired sample t-test was also applied. Table 4 above displays the findings of the normality test for the 12-sample data on the typical quantity of non-performing loans for conventional commercial banks before and during the year COVID-19. Table 4 contains the Paired Sample t-test results that are listed below.

Table 4. Paired Sample Test Results
Paired Samples Test

<i>Pair</i>	<i>NPL</i>	<i>Paired Differences</i>			<i>95% Confidence</i>		<i>t</i>	<i>df</i>	<i>Sig. (2-</i>
		<i>Mean</i>	<i>Std. Dev</i>	<i>Std. Error</i>	<i>Interval of the</i>				
					<i>Lower</i>	<i>Upper</i>			
	Before Covid-19 NPL	-.59333	.87138	.25154	1.1469 8	-.03969	-2.359	11	.038
	During Covid-19								

Source: Output processed data (2022)

It is known that the sig (2-tailed) NPL value of 0.038 is less than 0.05 based on Table 4 above. This demonstrates that H_0 is rejected while the alternative hypothesis in this investigation is supported. As a result, it is possible to say that there is a significant difference between NPLs at typical commercial banks registered with the Financial Services Authority before Covid-19 and NPLs during Covid-19. The fact that the NPL ratio has increased during the Covid-19 pandemic demonstrates how the pandemic impacts the risk of non-performing loans.

4 DISCUSSION

Non-Performing Loans Vary Between Covid-19 and Before It. The results showed a difference in the average NPL before and during Covid-19. The test results show that, as measured by the ratio of non-performing loans, the risk of non-performing loans during the Covid-19 period was higher than that of non-performing loans during the pre-Covid-19 period. This indicates a rise in the danger of credit that cannot be repaid during COVID-19 and a potential for consumers to run into financial problems, including declining client business income. The likelihood of banks experiencing adverse credit risk increases with the NPL ratio's value. This is consistent with study findings on the average credit of traditional commercial banks, which indicate a high volume of lending during the year Covid-19 and a consequent risk of uncollectible credit. Nonetheless, Table 3 shows that the average NPL for Covid-19, which is 3.3540 percent, is less than 5 percent, and therefore it can still be considered healthy.

By Financial Services Authority Regulation Number 4/POJK.03/2016, an NPL ratio of less than 5% is considered healthy. The Covid-19 pandemic has been going on for two years, starting on March 2, 2020, when it was first discovered in Indonesia. Thus, customers and banks are gradually returning to normal. This is assumed to be owing to a drop in the trend of Covid-19 cases. The clients' financial situation is beginning to improve, enabling them to pay back their loans. Customers and company players who are having trouble meeting their obligations are relieved by restructuring. The Financial Services Authority regulation POJK No.11/POJK.03/2020, which was updated with POJK No.48/POJK.03/2020 and extended by POJK No.17/POJK.03/2021 regarding the national economic stimulus as a countercyclical impact of the spread of Covid-19, contains a credit restructuring policy that the government anticipates will reduce the effect of the reach of Covid-19. Customers and company actors having trouble meeting their commitments are relieved by the relaxation of credit restructuring. This restructuring policy may lessen the strain of repaying credit loans for customers. The credit restructuring relaxation policy increased the average loan yield, which was still below 5%, indicating that this policy may keep the financial services sector's performance stable despite the Covid-19 pandemic's effects.

Using NPL financial ratios, the bank, serving as the signaler, will notify the signal recipient—consumers, shareholders, or potential investors—about the risk of bank non-performing loans so they can assess the level of non-performing credit risk to which banks

are exposed. The high NPL ratio value in this study implies that banks give consumers a lot of credit, which puts banks at more significant risk of dealing with non-performing loans. According to the study's findings, the average value of the bank's NPL ratio for the Covid-19 period, at less than 5%, can still be considered healthy. This is due to banks' adept management of credit risk. Before disbursing credit, banks conduct credit analysis by taking the rate of return into account to reduce the risk of non-performing loans and preserve investor confidence. Customer credit repayment ensures the smooth operation of banking operations. A bank's ability to effectively manage client credit risk is demonstrated by the NPL ratio being below 5%, which is a sign that the bank's credit management is sound. Banks can keep customers and investors confident to boost the bank's credibility in lending and lending and fundraising activities.

The findings of this study contrast with earlier studies [4], which concluded that there was no appreciable variation in the NPL ratio between the Covid-19 epidemic and other times. Due to the government's efforts through the credit restructuring policy contained in POJK No.48/POJK.03/2020, the Covid-19 pandemic does not affect the risk of non-performing loans. Additionally, customers are expected to still have personal savings to fulfill their obligations and pay loan installments. Yet, the study by Akbar et al. supports the research's findings that there are considerable disparities in NPL (2021), research by [3], which state that the NPL ratio is indicated to be affected by the Covid pandemic -19, so there is a significant difference between before and during Covid-19. This is reflected in the value of the movement of NPLs, which tends to increase, especially when the pandemic begins to plague Indonesia.

5 CONCLUSIONS

However, because the average value of the NPL ratio of conventional commercial banks during Covid-19 was less than 5%, it could still be considered healthy. The NPL of conventional commercial banks differences between Covid-19 and before it, with the NPL value during Covid-19 increasing compared to the period before Covid-19. The government is recommended to strengthen credit policy regulations that are even more effective for traditional commercial banks to safeguard the stability of the financial system and their credit distribution performance amid the Covid-19 pandemic. With reasonably large samples, future research will examine various banking objects, such as Islamic commercial banks and rural or rural Islamic banks. The Financial Services Authority expects conventional commercial banks to provide study samples, such as regional government banks or non-foreign national private commercial banks if the following researcher wishes to do the same research with the same research object. Future academics can also use the CAMELS and RGEC methodologies to evaluate the financial performance of institutions.

ACKNOWLEDGMENTS

Thank you to the Universitas of Bangka Belitung for funding the international conference at the PICEEBA event.

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