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CREDIT PERFORMANCE AND BOPO RATIO AT BANKS IN INDONESIA BEFORE AND DURING COVID-19

Azzahra Adira Ibrahim[1], Wirmie Eka Putra[2], Nela Safelia[3]
[1,2,3] Accounting Study Program, Faculty of Economics and Business,
Universitas Jambi, Jambi, Indonesia
Corresponding author email: diraazhra@gmail.com

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Abstract

The purpose of this study is to examine differences in credit performance and the BOPO ratio between Conventional and Islamic banks in Indonesia before and during COVID-19. This comparison is done by using NPL/NPF and BOPO ratio variables. The population in this study comprised all Conventional and Islamic banks in Indonesia; 92 samples were selected for conventional banks and 14 for Islamic banks using a purposive sampling technique with several criteria. The research data are secondary, sourced from the March 2019 – December 2020 quarterly report, supported by data from OJK. The research analysis tool uses the Wilcoxon test. The results of the research carried out show that NPL and BOPO at Conventional Banks differ before and during Covid-19, while NPF and BOPO at Islamic Banks remain the same before and during Covid-19. According to this study, Indonesian conventional banks saw changes in their credit risk (NPL) and efficiency (BOPO) during COVID-19, but Islamic banks saw little change. This should, in theory, strengthen Islamic banking models' ability to withstand crises. In practice, this implies that Islamic banks should continue to focus on operational effectiveness, while conventional banks require more robust risk management during economic downturns.

Keywords: Credit, Banking, NPL/NPF, BOPO, Covid-19.

INTRODUCTION

At this time the whole world is facing the corona virus that emerged at the end of 2019 precisely in December originating from the city of Wuhan, China. Corona virus causes respiratory tract infections, ranging from the common cold to serious illnesses such as MERS and severe acute respiratory syndrome (SARS). This virus is named Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV2), and causes Coronavirus Disease-2019 (Covid-19) (Ministry of Health of the Republic of Indonesia, 2020; Tiara et al, 2021; Widodo et al, 2024). The spread and increase in the number of Covid-19 cases occurred very quickly and has spread throughout the world, including Indonesia. The rapid increase in the number of cases in Indonesia requires the

government to take steps to prevent the spread of the virus by social distancing.

This Covid-19 case has had a huge impact in Indonesia, especially in the economic field. A large contraction in economic growth occurred in the second quarter of 2020 by 5.32% yon and experienced a growth contraction from the previous quarter of 4.19% (Central Bureau of Statistics, 2020; Rudyanto & Sintya, 2024; Khairudin, 2025). Minister of Finance, Sri Mulyani said the economic contraction occurred because when the PSBB was implemented, all economic activities stopped. There have even been massive layoffs in various companies due to the absence of production activities (Julita, 2020; Anjelina & Mulawarman, 2024).

The difficult conditions in the economy during the Covid-19 pandemic require that banks as credit providers to the public can manage and maintain lending according to a predetermined time period in order to operate optimally with stable financial performance (Komaria & Diansyah, 2019; Tiara et al., 2021). An increase in the distribution of credit funds carries a fairly high risk. This is because the Covid-19 pandemic has an impact on the world of work which will encourage the inability of debtors or borrowers to return borrowed funds (Tiwu, 2020; Djan et al., 2024). In addition, the decline in the performance of several sectors was also a factor driving the increase in the number of non-performing loans (NPL/NPF) for the banking industry.

In Indonesia, the types of banks consist of conventional banks and Islamic banks, where Islamic banks compete with conventional banks which are more dominant and are growing rapidly in Indonesia. Good management is needed to survive in the banking industry in the face of increasingly fierce competition. To be able to survive, the factor that needs to be considered by a bank is the performance of the bank's financial condition (Azmy et al., 2019; Sardiyo & Martini, 2021)). According to a Sharia Economic Observer, Adiwarman Karim, the condition of the Islamic banking industry could deteriorate earlier than the conventional banking industry (Ilhami & Thamrin, 2021; Charles et al., 2024).

On the other hand, the government issued OJK regulation Number 11/PJOK.03/2020 concerning National Economic Stimulus as a Countercyclical Policy for the Impact of the Spread of Covid-19, the regulation states that debtors whose businesses are affected by the pandemic can apply for restructuring to the finance company concerned (Wyana et al., 2022; Anjelina & Mulawarman, 2024). The existence of this regulation is crucial for economic growth and the stability of Indonesia's financial system during this pandemic.

In addition, the continued increase in non-performing loans during the Covid-19 pandemic greatly affected bank income. This is because interest income is the bank's main income obtained from the distribution of bank funds to customers. As happened to PT Bank Rakyat Indonesia Tbk, BRI's BOPO ratio was recorded to have increased from 70.50% in September 2019 to 80.64% in

September 2020. PT Bank Rakyat Indonesia Tbk Finance Director Haru Koesmahargyo said that the increase in BOPO was due to pressure on interest income due to the massive restructuring carried out since March 2020 as an effort to save MSMEs affected by the pandemic (Koesmahargyo, 2021; Wijaya et al., 2022).

The Financial Services Authority (OJK) noted that the BOPO ratio which measures operating income to cover banking operational costs at the end of the first quarter of 2020 jumped to 88.84% compared to the end of last year of 79.39%. The BOPO ratio at the end of the second quarter of 2020 fell slightly to 84.94%. However, at the end of the third quarter of 2020, it rose to 86.18% (Business Insight, 2020; Fakhira et al., 2023). In an official statement, Rebaca Tan as Analyst Financial Institutions Group Moody's said that lower interest rates for a longer period of time, rising credit costs and operating costs will weigh on the profitability of banks in Asia Pacific in the coming years, this trend is exacerbated. with the Corona virus outbreak (Tan, 2020; Farkasdi et al., 2021).

Several event study studies (event study) related to NPL, research has been carried out, one of which is (Santoso et al., 2019; Farkasdi et al., 2021), in his research, it was stated that there were significant differences in the NPL figures for regional banks before and after the Nias tsunami. Research on event studies during the Covid-19 pandemic has been carried out by (Jalih & Rani, 2020; Susilowati & Rofiq, 2021) regarding the NPL response of Conventional Banks in Indonesia before and after the Covid-19 Pandemic and the implementation of the New Normal. In his research, it was stated that the NPL number after the Covid-19 announcement did not experience a significant difference, while after the implementation of the New Normal there was a significant difference. Another research conducted by (Riftiasari & Sugiarti, 2020; Maftuhin & Kusumawardani, 2022) which compares the financial performance of conventional and Islamic BCA Bank sharia banks due to the impact of the Covid- 19 Pandemic. In his research, it is stated that there are significant differences in the NPL of Conventional Banks and the NPF of Sharia Banks, but there is no significant difference in the BOPO of Conventional and Sharia Banks. This research is not in line with the research conducted by (Ilhami & Thamrin, 2021; Sardiyo & Martini, 2021) which states that there is no significant difference in the NPF of Islamic banks in Indonesia.

This study's dual comparison methodology is what makes it novel, they are comparing performance before and during the COVID-19 pandemic is known as temporal comparison, and comparing the response and resilience of conventional and Islamic banks to economic pressures is known as a system comparison. The unique structural and operational features that support financial stability during uncertain times are highlighted by this integrated analysis, which provides fresh insights into the varying effects of a global health crisis on various banking models. When creating

responsive plans for upcoming crises, policymakers, financial regulators, and banking professionals will find these insights particularly pertinent. This study adds comparative empirical evidence on the effects of the Covid-19 pandemic on credit performance (NPL/NPF) and operational efficiency (BOPO) in Indonesian conventional and Islamic banks, thereby contributing to the literature on banking performance and crisis management. This research adds value by directly comparing the two banking systems within the same timeframe and using event study methodology, whereas prior studies have concentrated on the impact of the pandemic on either one type of bank or on general financial indicators.

RESEARCH METHODS

Research Design

The type of research used in this study is descriptive research with a quantitative approach, in this study a descriptive research method with a quantitative approach is used to further examine differences in credit performance and BOPO in conventional and sharia banks before and during Covid-19. The data source used in this study is secondary data source, which is obtained from quarterly publication report data sourced from the Financial Services Authority website through the website of the OJK www.ojk.go.id. In this study, the data used is the quarterly publication report March 2019 - December 2020. The data collection technique in this study uses documentation techniques, where the information obtained comes from financial report data that is the sample in the study as well as other information obtained from websites that can support research.

This study uses two variables, namely NPL/NPF and BOPO. Non-Performing Loan used in Conventional Banks while Non-Performing Finance is used in Islamic Banks. This ratio is used to measure the ability of bank management in overcoming non-performing loans provided by banks. Non-Performing Loan/Finance (NPL/NPF) is measured from the ratio between non-performing loans to total loans (Riftiasari & Sugiarti, 2020). Meanwhile, BOPO is a ratio that measures the ability of operating income to cover operational costs which is used to measure the level of efficiency and ability of a bank in carrying out its operations. If the ratio is increasing, it reflects that the bank is less able to reduce operational costs and increased operating income can cause bank losses which are less efficient in managing the business, with the formula below (Riftiasari & Sugiarti, 2020; Charles et al., 2024).

Sample and Population

The population of this study is all conventional and sharia banks registered with the Financial Services Authority (OJK). The method used in this research is purposive sampling. The criteria for selecting the sample are as follows (1) Conventional and Islamic banks registered with the Financial Services Authority; (2) Companies that issue quarterly reports for the period March 2019 -

December 2020; (3) Companies that present complete data according to the variables studied. So that the total sample used is 92 samples for Conventional Banks and 14 samples for Islamic Banks.

Instruments, and Data Collection Techniques

Data analysis begins with descriptive statistical tests. Descriptive statistics are statistics that have the task of collecting, processing, and analyze data and then presenting it in a good form which aims to provide a description or description of the data seen from the average, standard deviation, variance, maximum, minimum, sum, range, kurtosis, and skewness (Ghozi & Sunindyo, 2015). The descriptive statistical analysis used in this study includes the average, maximum, minimum, and standard deviation values of each variable.

Next, do a normality test, in this study using a test tool Kolmogorov Smirnov. This test is carried out by comparing the distribution of the data (which will be tested for normality) with the standard normal distribution (Cooper & Schindler, 2017). If the significance is below 0.05, it means that there is a significant difference, and if the significance is above 0.05, there is no significant difference. The application of the Kolmogorov Smirnov test is that if the significance is below 0.05, it means that the data to be tested has a significant difference with the standard normal data, meaning that the data is not normal (Cooper & Schindler, 2017).

The next step is to test the hypotheses using Wilcoxon Signed Rank Test. Wilcoxon Signed Rank Testis a nonparametric test to measure the significance of the difference between 2 groups of paired data on an ordinal or interval scale but not normally distributed. The Wilcoxon Signed Rank Test is an alternative test to the paired t test or the paired t test if it does not meet the normality assumption (Pramana, 2012). The basis for making decisions to accept or reject the hypothesis in this test are as follows: 1) If the probability (Asymp.Sig) < 0.05, then Ho is rejected and Ha is accepted, 2) If the probability (Asymp.Sig) > 0.05, then Ho is accepted and Ha is rejected.

RESULTS AND DISCUSSION

In the table 1 descriptive statistical test for the NPL variable at conventional banks before covid-19 as a whole during 2019 the minimum value was .00 with a maximum value of 7.59. While the average is at 3,0203 and the standard deviation is 1,74677. While the NPL variable for conventional banks during COVID-19 as a whole during 2020 the minimum value is .00 with a maximum value of 9.12. Meanwhile, the average is 3.2704 and the standard deviation is 2.00534.

For the BOPO variable at conventional banks before covid-19 as a whole during 2019, the minimum value was 43.26 with a maximum value of 176.42. Meanwhile, the average is 84.7657 and the standard deviation is 16.46188. While the BOPO for conventional banks during COVID-19 as a whole during 2020 the minimum value was 44.33 with a maximum value of 230.13. Meanwhile, the average is 88.2821 and the standard deviation is 23.13273.

For the NPF variable at Islamic banks before covid-19 as a whole during 2019, the minimum value is .00 with a maximum value of 6.12. Meanwhile, the average is 3.0093 and the standard deviation is 1.87744. While the NPF for Islamic banks during COVID-19 as a whole during 2020 the minimum value is .00 with a maximum value of 7.00. Meanwhile, the average is 3,0743 and the standard deviation is 1,96766.

For the BOPO variable at Islamic banks before covid-19 as a whole during 2019, the minimum value was 57.45 with a maximum value of 99.56. Meanwhile, the average is 86.8536 and the standard deviation is 13,81764. While the BOPO for Islamic banks during COVID-19 as a whole during 2020 the minimum value is 67.85 with a maximum value of 136.21. Meanwhile, the average is 92.2207 and the standard deviation is 15,62096.

Table 1
Descriptive Statistics Test

	N	Min.	Max.	Mean	Std. Deviation
NPL Before Covid-19	92	.00	7.59	3.0203	1.74677
NPL After Covid-19	92	.00	9.12	3.2704	2.00534
BOPO Before Covid-19	92	43.26	176.42	84.7657	16.46188
BOPO After Covid-19	92	44.33	230.13	88.2821	23.13273
NPF Before Covid-19	14	.00	6.12	3.0093	1.87744
NPF After Covid-19	14	.00	7.00	3.0743	1,96766
BOPOS Before Covid-19	14	57.45	99.56	86.8536	13.81764
BOPOS After Covid-19	14	67.85	136.21	92.2207	15.62096
Valid N (listwise)	14				

Source: The Processed Primary Data (2021)

Table 2: Kolmogorov Smirnov. Normality Test

Variable	**Sig. Kolmogorov Smirnov**
Conventional Bank NPL Before Covid-19	0.140
Conventional Bank NPL After Covid-19	0.200*
BOPO Conventional Bank Before Covid-19	0.004
BOPO Conventional Bank After Covid-19	0.000
Sharia Bank NPF Before Covid-19	0.200*
Sharia Bank NPF After Covid-19	0.200*
BOPO Sharia Bank Before Covid-19	0.067
BOPO Sharia Bank After Covid-19	0.012

Source: The Processed Primary Data (2021)

The results of the Kolmogorov Smirnov normality test can be seen the value of Sig. for Conventional Bank NPL data before Covid-19 of0.140, while the value of Sig. for Conventional Bank NPL data during Covid-19 is 0.200. For Shariah Bank NPF data, the value of Sig. before and during Covid-19 both of 0.200. And finally, the BOPO data for Sharia Banks before COVID-19

was 0.067. This indicates that the data for the five groups of NPLs is normally distributed. While the value of Sig. for Conventional Bank BOPO data before Covid-19 of 0.004, the value of Sig. for Conventional Bank NPL data during Covid-19 is 0.000. And the value of Sig. For Islamic Bank data during Covid-19, it is 0.012. This indicates that the data for these three groups are not normally distributed because the value of Sig. smaller than the criteria, namely Sig. < 0.05. Based on this assumption, because there are several groups of data that are not normally distributed, the hypothesis testing will be carried out using a non-parametric approach.

Table 3
Wilcoxon Rank Test

Variable	Sig. Wilcoxon Rank Test
Conventional Bank NPL	0.012
BOPO Conventional Bank	0.002
Sharia Bank NPL	0.382
Sharia Bank BOPO	0.925

Source: The Processed Primary Data (2021)

From the results of the Wilcoxon Rank Test, the significance value of the Conventional Bank's NPL ratio difference test is 0.012 with a probability of 0.000 < 0.05, the hypothesis (H1) is accepted, this indicates that there is a significant difference between the NPL ratio of Conventional Banks before and during the Covid-19 outbreak, so it can be concluded it was said that conventional banks during the Covid- 19 pandemic did not have the same ability when handling non-performing loans.

The significance of the difference in the BOPO ratio test for Conventional Banks is 0.002 with a probability of 0.000 < 0.05, so the hypothesis (H2) is accepted. This indicates that there is a significant difference between the BOPO ratio of Conventional Banks before and during the Covid-19 outbreak. This shows that during the Covid-19 pandemic the use of bank operational costs has different capabilities in providing customer facilities and services.

The significance of the difference test of the NPF ratio of Sharia Banks is 0.382 with a probability of 0.000 < 0.05, so the hypothesis (H3) is rejected, this indicates that there is a similarity between the NPL ratio of Sharia Banks before and during the Covid-19 outbreak, so it can be said that Sharia Banks ah, during the Covid-19 pandemic, they have the same ability when dealing with non-performing loans.

The significance of the difference test for the BOPO ratio of Sharia Banks is 0.925 with a probability of 0.000 < 0.05, so Hypothesis (H4) is rejected, this indicates that there is a similarity between the BOPO ratio of Sharia Banks before and during the Covid-19 outbreak. This shows

that during the Covid-19 pandemic the use of bank operational costs has the same ability to provide customer facilities and services

CONCLUSION

Based on the results of the research that has been explained in the results of the research and discussion, it can be concluded that: 1) In the NPL there are significant differences due to the increasing number of Covid-19 cases so that business and other activities are limited, and possibly with a long period of time, namely March-June. already experiencing difficulties where income is reduced, business turnover has decreased, of course, savings to survive during the pandemic have also decreased so that it can have an effect on changes in the NPL value. 2) BOPO experienced a significant difference due to the increasing number of covid-19 cases so that business and other activities were limited, and possibly with a long period of time, namely March-June, the community is increasingly experiencing difficulties where income is reduced, business turnover is decreasing, of course, savings to survive during the pandemic have also decreased so that it can have an influence on changes in the BOPO value. 3) NPF before covid-19 and during covid-19 did not experience a significant difference but in the output ranks, the positive rank value is higher than the negative rank. 4) BOPO before covid-19 and during covid-19 did not experience a significant difference. In the output ranks, the positive rank values are the same as the negative ranks. 5) It can be seen from the previous hypothesis test, that there are differences in credit performance and operating expenses on operating income at conventional and Islamic banks before and during covid-19.

The implication of this study describes that macroeconomic shocks can have a direct impact on banking performance metrics is supported by the notable shifts in NPL (non-performing loans) and BOPO (operating expenses to operating income) during COVID-19. This argues in favor of adding external crisis variables to models of financial distress. The study result emphasizes the necessity of improving current theories regarding credit risk management in various banking systems (conventional vs. Islamic) during times of stress, such as a pandemic.

There are several research suggestions, namely: 1) For Banks: Banks can use the results of this study to monitor the movement of NPL/NPF and BOPO in response to the COVID- 19 pandemic phenomenon so that it can be used in determining strategies in reviewing restructuring and granting new loans. during this pandemic, 2) For the Government: The restructuring policy will certainly ease the burden on business actors while reducing the existing NPL/BOPO rate. However, conventional banks in real terms still bear the impact of declining revenues and even losses. Through this research, in a short time span, it can be used as material for evaluating the policies that have been implemented in order to find the best alternative policies for all parties in the economy. 3) For

further researchers: This research can be used as a basis for further research on other aspects as indicators of the health of Indonesian banks affected by the pandemic. The data is continued for a longer time span to see the long-term response of NPL/NPF and BOPO to the COVID-19 phenomenon.

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