

## DOES PANDEMIC COVID-19 AFFECT BANK PERFORMANCE? CASE STUDY ON CONVENTIONAL BANKS IN INDONESIA

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### Abstract

Coronavirus disease 2019 (Covid-19) impacts not only health but also the global economy. As part of an economic system, banking is also affected. The purpose of this study is to analyze the impact of Covid-19 on the performance of banks listed on the Indonesia Stock Exchange. The bank's performance consists of non-performing loans (NPL), loan to deposit ratio (LDR), return on assets (ROA), return on equity (ROE), operating expenses and operating income (OEIR) and capital adequacy ratio (CAR). The population was 44 banks, but in this study 43 banks were taken because one data bank was outside the criteria (outlier). Data collection was carried out on a quarterly basis, namely the first, second and third quarters from 2017 to 2019 representing the period before the pandemic and the first, second and third quarters of 2020 representing the period during the pandemic. To test the hypothesis, the independent sample t-test was used. The results showed that NPL and OEIR had a significant effect, while LDR, ROA, ROE and CAR were not affected by the pandemic. This study also examines whether there are differences in the groups of large and small banks. The findings show that there are significant differences in NPL, LDR, ROE and CAR resulting in bear banks and small banks, while ROA and OEIR are not significantly different from the effects of the Covid-19 pandemic.

**Keywords:** Covid-19, bank performance, nonperforming loan, lending to deposit ratio, return on asset, return on equity, Capital adequacy ratio

### INTRODUCTION

Coronavirus disease, which began to emerge in 2019 or known as Covid-19, has an impact on almost all areas of life. The virus, which was first discovered in the market in Wuhan, China, is transmitted from animal to human, and human to human all over the world which is difficult to stop transmission given the high mobility of humans between countries. Judging from the coverage of the affected areas, Covid-19 is the most severe pandemic of all pandemics that have ever existed and were unthinkable before.

WHO Coronavirus Disease (COVID-19) Dashboard, reported that as of December 31, 2020, there were 83,060,276 cases of Covid-19 in the world, 58,801,859 people recovered and 1,810,092 people died. Looking at the development chart, it is possible that the number of Covid-19 cases will continue to increase and it cannot be predicted when it will end. (McKibbin & Fernando, 2020), stated that the impact of Covid-19 can kill everyone from any socio-economic group. The case of the Covid-19 pandemic concerns not only health problems but also the global economy.

Davis, Hansen & Seminario-Amez (2020) describe the impact of Covid-19 as an economic disruption unprecedented in modern times. Real GDP fell 11 percent in the United States and 15 percent in the Euro area in the first half of 2020, the biggest decline since World War II. Albuquerque, Koskinen, Yang & Zhang (2020), assess that Covid-19 has an incomparable impact on market destruction. The stock market in the United States fell 30 percent in just one month at the start of the pandemic. Almost all countries experience a recession, including Indonesia.

Research on the effect of Covid-19 on company performance has been conducted by: Rababah, Al-Haddad, Sial, Chunmei & Cherian (2020) who found that the average industry has decreased margins. Barua & Barua (2020), increasing non-performing loans (NPL), decreased interest income and capital adequacy ratio (CAR). However, Broadstock, Chan, Cheng & Wang (2020), found that the performance of stocks labeled environment, social and governance (ESG) has increased. Findings of Lelissa (2020), pandemic affects balance and profit bank losses Siregar (2020), JCI fell by 0.79 percent, LQ45 fell 1.22 percent, JII rose 0.14 percent instead.

Azhari & Wahyudi's research (2020) on Islamic banks in Indonesia found fluctuations in TPF and debt financing, a constant decrease in leasing, but a significant increase in equity financing. Ilhami & Thamrin (2020) in Islamic banks in Indonesia, no significantly different in the ratio of CAR, ROA, NPF and FDR. Sutrisno, Panimbing & Adristi (2020), Islamic banks in Indonesia have a significant difference in operating margin (NOM), ROE and FDR, while CAR, NPF, ROA and OPO are not significantly different.

Based on the description above and considering that the research is generally related to Islamic banks, in order to provide a comprehensive picture of the effect of Covid-19 on banking performance, the author intends to examine all banks listed on the Indonesia Stock Exchange. Using 6 (six) performance variables, namely NPL, LDR, ROA, ROE, OEIR and CAR, to examine whether there were differences in performance before and during the Covid-19 pandemic as a result of the impact of Covid-19. The study also analyzed the differences in the performance of large and small bank groups due to the impact of the pandemic.

## **LITERATURE REVIEW**

### **o Bank Performance**

Basically, bank performance can be viewed from financial performance and non-financial performance. However, as a financial institution, financial performance is more dominant than non-financial performance so that bank performance is often synonymous with bank financial performance as proxied by financial ratios. Six bank performances in this study refer to Bank Indonesia Circular Letter No. 13/24 / DPNP / 201 and No. 6/23 / DPNP / 2004 and the Financial Services Authority Letter No. 14 / SE OJK.03/2017 regarding the assessment of the soundness of commercial banks, namely:

### **o Nonperforming loan (NPL)**

Non-performing loans (NPLs) are the ratio of non-performing loans to total loans. Non-performing loans can come from internal banks and external banks (Ismail, 2015). Tho'in (2019), NPL has an adverse impact. NPL affects income, profit, capital adequacy and

assessment of bank soundness and public trust. Non-performing loans consist of collectability of 3 (substandard), have arrears between 90 days to 120 days; collectability 4 (Doubtful) has a life of arrears of 121 days up to 180 days; and collectability 5 (Loss) has an arrears age of more than 181 days.

○ **Loan to deposit ratio (LDR)**

Loan to deposit ratio (LDR) to determine the liquidity capacity of a bank. According to Fahmi (2014) liquidity is the ability of banks to meet short-term needs. However, Lelisaa (2020) sees the need for LDR to measure the functioning of the bank intermediation function, namely collecting as much funds as possible and channeling it in the form of credit. Bank Indonesia regulates the LDR of banks in the range of 78 -92 percent (BI Circular Letter No.15 / 41 / DKMP / 2013) so that the intermediary function and bank liquidity run well.

○ **Return on Asset (ROA)**

Koh, Ang, Brigham & Ehrhardt (2014) give the term return on total assets, to measure the rate of return on assets from net income obtained by the company. ROA is a popular measure for measuring the effectiveness of companies in generating profits by utilizing assets owned. Big profits. attracts investors because the company has a high rate of return (Wardiah, 2013). Profitability ratios are usually analyzed vertically and are common size analyzes (Indonesian Bankers Association, 2017).

○ **Return on Equity (ROE)**

Like return on assets (ROA), return on equity (ROE) is a ratio to measure profitability. If ROA compares net income with assets, ROE compares with own capital. According to Deanta (2016), ROE measures the success of management in maximizing the rate of return to shareholders. ROE is a profitability ratio that measures a company's ability to generate profits based on the company's share capital (Chowdhury & Nehal, 2020). If the ROE is greater than the deposit interest rate, investors will most likely choose the company's shares.**Beban Operasional dan**

○ **Operating Expense to Operating Income (OEIR)**

According to Riftiasari & Sugiarti (2020), OEIR is a ratio to measure the ability of operating income to cover operational costs. Putera (2020), the OEIR ratio as a representation of a bank's ability to manage assets and manage risk. Sutrisno et al (2020) OEIR, an indicator of bank efficiency, the higher the OEIR the lower the profitability.

○ **Capital Adequacy Ratio (CAR)**

For banks, capital besides functioning as a source of financing for operational activities is also to maintain public confidence in the ability to carry out the function of an intermediary institution (Idroes, 2011). Capital adequacy is measured by CAR which is calculated based on the principles established by the Bank for International Settlements, namely Capital divided by Risk Weighted Assets (Ismail, 2015).

### **Bank Size**

According to Dao & Nguyen (2020), bank size is closely related to profitability. According to Fadly & Setianingsih (2020), companies with large assets can use existing resources as much as possible to reach market share. Sienatra (2020), large banks are likely to benefit from economies of scale. Smaller banks and those operating in a niche market are less able to take advantage of cross-selling and increase sales of other products (Demirguc-Kuntet al, 2020). However, empirical evidence of the relationship between bank size and efficiency is still problematic (Istinfarani & Azmi, 2020).

### **PREVIOUS RESEARCH**

Research related to the company performance of the Covid-19 pandemic, Rababah, et al (2020), confirms that the average company's profit margin has decreased as shown by a decrease in ROA and ROE. Barua & Barua (2020), the pandemic has an impact on increasing NPL and decreasing interest income and eroding CAR. Lelissa (2020), uses a financial intermediary approach to bank balance sheets and income statements. Broadstocket al (2020), portfolios labeled social environment and governance with high scores tend to increase Siregar (2020), JCI fluctuates down by an average of 0.79 percent, LQ45 falls by 1.22 percent but JII increases by 0.14 percent. Fitriani (2020), there are significant differences between BRI Syariah and BNI Syariah in the ratio of NPF, ROA and OEIR.

Riftiasari & Sugiarti (2020), show that the performance of BCA Conventional and BCA Syariah has significant differences in CAR, ROA and LDR, while NPL and OEIR have no significant differences. Surya & Aziyah (2020), there are differences in the performance of BNI Syariah and Bank Syariah Mandiri on ROA, NPF & OEIR, while CAR and ROE are not significantly different. Sutrisnoet al (2020), research on Islamic banks shows, CAR, NPF, ROA and OEIR no different. Only FDR, ROE and NOM are significantly different. Azhari & Wahyudi (2020) in Islamic banks found fluctuations in deposits and debt financing, leasing decreased constantly but equity financing increased significantly, while the FDR ratio did not differ significantly. The findings of Ilhami & Thamrin (2020) on Islamic banks CAR, ROA, NPF and FDR are not significantly different or generally Islamic banking is quite capable of dealing with Covid-19.

### **HYPOTHESIS DEVELOPMENT**

#### **Non Performing Loan (NPL)**

Non-performing loans can come from internal banks and external banks (Ismail, 2015). External factors include natural disasters, such as the Covid-19 pandemic. The findings of Barua & Barua (2020), Fitriani (2020) and Surya & Azizah (2020) confirm an increase in NPLs during the Covid-19 pandemic. However, research by Sutrisno et al (2020 and Ilhami & Thamrin (2020) shows that NPLs do not differ significantly in Islamic banks in Indonesia between before and during the Covid-19 pandemic. This is reasonable, because Islamic banks use a profit sharing system in their operations. NPL, then the hypothesis in this study are:

*H<sub>1</sub>: There was an increase in non-performing loans (NPLs) at banks listed on the Indonesia Stock Exchange before and during the Covid-19 pandemic.*

### **Loan to Deposit Ratio (LDR)**

In general, LDR is a ratio to measure the level of bank liquidity, but Lelissa (2020) sees the need to measure a bank's ability to carry out an intermediation function. Lending is the main activity of the bank (Wardiah, 2013). Bank Indonesia regulates the LDR for banks in the range of 78 to 92 percent (BI Circular Letter No.15 / 41 / DKMP / 2013) so that liquidity and intermediation functions are balanced. Recession conditions in 2020 affect the ability of banks to extend credit or LDR to decline. This is confirmed by the findings of Istinfarani & Azmi (2020), Riftingasari & Sugiarti (2020) and Sutrisno et al (2020). Therefore, based on this description, in relation to LDR, the hypotheses in this study are:

*H<sub>2</sub>: There is a decrease in the loan to deposit ratio (LDR) of banks listed on the Indonesia Stock Exchange before and during the Covid-19 pandemic.*

### **Return on Asset (ROA)**

ROA is the bank's ability to generate net profit from its assets, including its sources of debt and equity. Large profits will attract investors because the company has a high rate of return (Wardiah, 2013). The bigger the LDR and the smaller the NPL will increase bank profits. Soekapdjo (2020), shows that OEOI, inflation and exchange rates have a negative effect on ROA, while LDR, TPF have a positive effect on ROA. The influence of the Covid-19 pandemic on ROA was confirmed by Rababah et al (2020), Fitriani (2020), Surya and Azizah (2020) which confirms there are significant differences in ROA before and during the pandemic. Therefore, regarding ROA, the hypotheses in this study are:

*H<sub>3</sub>: There is a decrease in return on assets (ROA) at banks listed on the Indonesia Stock Exchange before and during the Covid-19 pandemic.*

### **Return on Equity (ROE)**

Return on equity (ROE) is also known as return on equity (Fahmi, 2014). ROE is a profitability ratio that measures a company's ability to generate profits based on the company's share capital (Chowdhury & Nehal, 2020). The higher the ROE the better, it increases firm value, and is generally very much considered by investors. Basically, a decrease in ROA also results in a decrease in ROE because the ROA and ROE formulations only have different dividers. Regarding Covid-19, Rababah et al (2020), and Sutrisno et al (2020) confirmed a decrease in ROE before and during the pandemic. Unlike the findings of Surya & Aziyah (2020) on Bank BNI Syariah and Bank Syariah Mandiri, ROE is not significantly different. This probably happened because it only used a sample of 2 banks. Therefore, based on this description, regarding ROE, the hypotheses in this study are:

*H<sub>4</sub>: There is a decrease in return on equity (ROE) in banks listed on the Indonesia Stock Exchange before and during the Covid-19 pandemic.*

### **Operating Expense to Operating Income (OEIR)**

According to Riftingasari & Sugiarti (2020), OEIR aims to measure the ability of operating income to cover operational costs. OEIR is directly related to the main activities of a bank so that OEIR can be influenced by the quality of NPL and LDR. Sutrisno et al (2020) found that OEOI in Islamic banks is not significantly different considering that NPL is also not significantly different. Fitriani (2020) and Surya & Aziyah (2020) show a significant difference in OEIR in

state-owned Islamic banks during the pandemic. Logically, if H1 above states that NPL is increasing, then OEIR will also increase so that the hypothesis of this research is:

*H<sub>5</sub>: There is an increase in operating expenses to operating income (OEIR) at banks listed on the Indonesia Stock Exchange before and during the Covid-19 pandemic.*

### **Capital Adequacy Ratio (CAR)**

It is often called the capital adequacy ratio, which is how a bank is able to finance its activities with its capital ownership (Fahmi, 2014). A deterioration in credit quality logically affects ROA, ROE, OEIR and CAR, unless there is a capital injection. Barua & Barua (2020) found that a pandemic has an impact on increasing NPL and decreasing interest income and CAR. Islamic banks, the Covid-19 pandemic has no significant effect on CAR as researched by Surya & Aziyah (2020), Ilhami & Thamrin (2020). However, considering that the banks on the Indonesia Stock Exchange are generally not sharia, then in relation to CAR, the hypothesis in this study is.

*H<sub>6</sub>: There is a decrease in the capital adequacy ratio (CAR) of banks listed on the Indonesia Stock Exchange before and during the Covid-19 pandemic*

### **Big Banks and Small Banks**

According to Dao & Nguyen (2020), bank size is closely related to profitability. According to Fadly & Setianingsih (2020), companies with large assets can use existing resources as much as possible to reach market share. Sienatra (2020), large banks may benefit from economies of scale. In this regard, the hypothesis regarding bank size is:

*H<sub>7</sub>: There are differences in the six performance (NPL, LDR, ROA, ROE, OEIR and CAR) between large and small bank groups during the Covid-19 pandemic.*

## **RESEARCH METHOD**

The object of research is banks listed on the Indonesia Stock Exchange, using financial reports for the first quarter to the third quarter of 2017, 2018 and 2019 representing the period before the Covid-19 pandemic, and the first quarter of 2020 to the third quarter of 2020 representing the period during the Covid-19 pandemic. At the time of the research, the latest data used was the Quarter III / 2020 report because until early April 2020 at the time this thesis was prepared, not all banks had published annual reports/quarter IV / 2020 During a pandemic, banks are given leeway in submitting reports.

### **Variabales and Measurement**

In this study, there are 6 variables used as indicators of banking performance. Here are the variables and measurements:

Table 1. Variables and Measurement

No	Variabel	Simbol	Pengukuran
1	Non Performing Loan	NPL	Non Performing Credit/Total Loan
2	Loan to Deposit Ratio	LDR	Total Loan/Third Party Fund
3	Return on Asset	ROA	EAT/ Total Asset
4	Return on Equity	ROE	EAT/Total Equity
5	Operating expenses to Operating Income	OEIR	Operating expenses/Operating Income
6	Capital Adequacy Ratio	CAR	Total Equity/ Weight Asset Based Risk

Source: BI (2004) dan OJK (2017)

### Population dan Sample

The population in this study were 44 banks listed on the Indonesia Stock Exchange. Because there was one bank whose financial statements did not meet the requirements, the sample was enrolled as many as 43 banks. The sample consisted of 7 Buku 4 banks with capital > IDR 30 trillion), 15 Book 3 banks (IDR 5 trillion <capital <IDR 30 trillion), 20 Books2 (IDR 1 trillion <capital <IDR 5 trillion), and 2 Books 1 (capital <IDR 1 trillion). However, in this study, 43 banks were taken because 1 data bank was outside the criteria (outlier). Furthermore, the 43 banks were divided into two groups, namely the Large Bank group totaling 22 banks (Book 3 and Book 4) and the Small Bank group totaling 21 banks (Book 1 and Book 2). The grouping is also intended to analyze how much influence the Covid-19 pandemic has on large and small banks.

### Data Analysis

The analytical method used is descriptive analysis and statistical tests. Descriptive analysis to provide an overview of the performance of each bank obtained in the study and also statistical testing to determine its significance. The statistical test used was independent samples t-test. The independent sample t-test can provide information to researchers whether there is a statistically significant difference between the two sample groups (Gerald, 2018). According to Hartono (2016), the t-test is a statistical test to determine whether or not there is a significant (convincing) difference between two sample means (two comparative variables).

### HASIL DAN PEMBAHASAN

From the research results, it is found that on average the performance of banks listed on the Indonesia Stock Exchange has decreased due to the complete Covid-19 pandemic can be seen in table 2.

Table 2. Group Statistics Before and During Pandemic

GRUP		N	Mean	Std. Deviation	Std. Error Mean
NPL	BEFORE	129	3.4926	2,07919	.18306
	PANDEMIC	129	4.0274	2,22188	.19563
LDR	BEFORE	129	90.4870	17,92942	1,57860
	PANDEMIC	129	89.6638	21,02695	1,85132
ROA	BEFORE	129	1.7209	2,11616	.19564
	PANDEMIC	129	1.3874	1,63605	.15125
ROE	BEFORE	129	8.2550	6,68398	.61793
	PANDEMIC	129	7.1795	6,44670	.59600
OEIR	BEFORE	129	88.4463	15,30247	134731
	PANDEMIC	129	92.7629	19,78637	174209
CAR	BEFORE	129	23.6591	10,27002	.90422
	PANDEMIC	129	23.6422	9,89242	.87098

Source: Data processed

Based on the results of the statistical test, the independent sample test (t-test) with SPSS version 17.0 can be displayed as follows:

Table 3. Independent Samples Test before and during Pandemic

		Levene's Test for Equality of Variances		t-test for Equality of Means Confidence level 95%				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
NPL	Equal variances assumed	1.965	.162	-1.996	256	.047**)	-.53473	.26792
	Equal variances not assumed			-1.996	254.880	.047	-.53473	.26792
LDR	Equal variances assumed	1.353	.246	.338	256	.735	.82318	2.43297
	Equal variances not assumed			.338	249.763	.735	.82318	2.43297
ROA	Equal variances assumed	1.455	.229	1.349	232	.179	.33350	.24729
	Equal variances not assumed			1.349	218.169	.179	.33350	.24729
ROE	Equal variances assumed	.229	.633	1.253	232	.212	1.07547	.85852
	Equal variances not assumed			1.253	231.698	.212	1.07547	.85852
OEIR	Equal variances assumed	.369	.544	-1.960	256	.050**)	-4.31659	2.20230
	Equal variances not assumed			-1.960	240.774	.050	-4.31659	2.20230
CAR	Equal variances assumed	.168	.682	.013	256	.989	.01682	1.25548
	Equal variances not assumed			.013	255.642	.989	.01682	1.25548

Note: \*\*\*, \*\*, \* denote significant 1%, 5%, and 10%



Table 3 above shows that the risk of lending as measured by non-performing loans (NPL) produces a significance value of 0.047, below the significance level of 0.05, which means that there is a significant difference in the NPL before and during the pandemic. The average NPL before the pandemic was 3.49, increasing to 4.03 during the pandemic. This is in line with the results of research by Barua & Barua (2020), Fitriani (2020) and Surya & Aziyah (2020) which confirm the effect of an increase in NPL due to the pandemic. However, Sutrisno et al (2020), Riftiasari & Sugiarti (2020), Ilhami & Thamrin (2020) who examined Islamic banks, found that there were no significant differences before and during the Covid-19 pandemic.

For the loan to deposit ratio (LDR), it produces a significance value of 0.735 above the significance level of 0.05, which means that there is no significant difference before and during the pandemic. Banks listed on the Indonesia Stock Exchange had relatively no LDR problems related to the impact of the pandemic. The average LDR before the pandemic was 90.48 percent and during the pandemic it was 89.66 percent. This is in line with Azhari & Wahyudi (2020), Ilhami & Thamrin (2020). However, research by Riftiasari & Sugiarti (2020), Surya & Aziyah (2020), Sutrisno et al (2020) on Islamic banks confirms differences before and during the pandemic. or the Covid-19 pandemic has an effect on LDR in the form of the ability of banks to channel credit/financing.

Profitability as measured by return on assets (ROA) produces a significance value of 0.179, above the 0.050 significance level, which means that there is no significant difference in ROA before and during the pandemic. The average ROA before the pandemic was 1.72 percent and during the pandemic was 1.39 percent. Although it was confirmed that NPLs were significantly affected, banks were still able to make profits because banks also had income from outside credit. This is in line with the research of Sutrisno et al (2020) which did not have a significant difference between before and during the pandemic, which means that the Covid-19 pandemic did not affect ROA. However, the results of research by Rababah et al (2020), Fitriani (2020), Riftiasari & Sugiarti (2020), Surya & Aziyah (2020) show a difference or influence of the Covid-19 pandemic.

Return on equity (ROE), which is a bank's ability to generate profits, produces a significance value of 0.212, which is greater than the 0.05 significance rate, so that there is no difference in ROE between before and during the pandemic. The average ROE before the pandemic was 8.25 percent and during the pandemic was 7.18 percent. The discussion is like ROA, in general the banks listed on the Indonesia Stock Exchange are able to control ROE during a pandemic. These results are in line with the results of research by Surya & Aziyah (2020), but not in line with research by Sutrisno et al (2020) on Islamic banks in Indonesia indicating that there is a significant difference in ROE between before and during the Covid-19 pandemic.

Meanwhile, the ratio of operating expenses and operating income (OEIR) shows a significance of 0.050, which means that there is a difference in the ratio of OEIR between before and during the pandemic. The average OEIR before the pandemic was 88.44 percent and during the pandemic was 92.76 percent. This is in line with the findings of Fitriani (2020) and Surya & Aziyah (2020), which show the difference in OEIR between before and during the pandemic. However, Riftiasari & Sugiarti (2020), Sutrisno et al (2020) found, before and during the pandemic there was no difference. Significant OEIR. The main activity is lending so that non-performing loans have an impact on increasing OEIR.

Furthermore, the capital adequacy ratio (CAR) resulted in a significance value of 0.989 more than 0.050, which indicates that there was no difference between before and during the pandemic. The average CAR before the pandemic was 23.66 percent and during the pandemic was 23.64 percent. AR is capital adequacy reflecting the bank's readiness to bear the risk of loss. In general, banks listed on the Indonesia Stock Exchange have met CAR requirements and are trying to maintain a minimum of 8 - 14 percent during a pandemic according to their risk profile. This also applies to Islamic banks in Indonesia, according to research by Sutrisno et al (2020) that there is no significant difference between CAR before and during the Covid-19 pandemic.

The study also tested whether there was a difference in performance between the large bank groups and the small bank groups listed on the Indonesia Stock Exchange. Large bank groups were 22 banks and small bank groups were 21 banks, (average performance table 4)

Table 4. Group Statitics Big Bank dan Small Bank

GRUP		N	Mean	Std. Deviation	Std. Error Mean
NPL	BIG_BANK	66	3.2958	1.6157	.19888
	SMALL_BANK	63	4.0270	1.9740	.24298
LDR	BIG_BANK	66	92.5124	23.8624	2.9373
	SMALL_BANK	63	89.6640	43.9508	5.5373
ROA	BIG_BANK	66	1.8971	1.9345	.23812
	SMALL_BANK	63	1.3900	3.3461	.42156
ROE	BIG_BANK	66	7.7740	6.1928	.76228
	SMALL_BANK	63	4.0620	7.0739	1.1384
OEIR	BIG_BANK	66	84.0780	13.5381	1.6664
	SMALL_BANK	63	77.0873	39.9457	5,0327
CAR	BIG_BANK	66	21.3624	5.9923	.73761
	SMALL_BANK	63	26.0306	12.3717	1.5587

The results of the statistical test for independent samples test (different test) used a significance level of 5 percent and 10 percent. Table 5 shows the differences in the performance of the large and small bank groups with the following explanation:

Table 5. Independent Samples Test Big Bank and Small Bank

		Levene's Test for Equality of Variances		t-test for Equality of Means Confidence Level 95%				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
N P L	Equal variances assumed	292.581	.000	-5.824	127	.000	-27.82440	4.77720
	Equal variances not assumed			-5.690	62.205	.000	-27.82440	4.89014
L D R	Equal variances assumed	52.442	.000	5.420	127	.000	33.54084	6.18856
	Equal variances not assumed			5.351	94.652	.000	33.54084	6.26809
R O A	Equal variances assumed	.819	.367	1.060	127	.291	.50712	.47854
	Equal variances not assumed			1.047	98.327	.297	.50712	.48417
R O E	Equal variances assumed	242.447	.000	-4.336	127	.000	-26.21804	6.04667
	Equal variances not assumed			-4.239	63.913	.000	-26.21804	6.18551
O E I R	Equal variances assumed	58.074	.000	1.343	127	.182	6.99073	5.20364
	Equal variances not assumed			1.319	75.475	.191	6.99073	5.30140
C A R	Equal variances assumed	52.741	.000	-2.747	127	.007	-4.66821	1.69952
	Equal variances not assumed			-2.707	88.638	.008	-4.66821	1.72440

Note: \*\*\*, \*\*, \* denote significant 1%, 5%, and 10%

NPLs generate a significant value of 0,000 or a very significant difference between large banks and small banks during this pandemic. The average NPL of the large bank group was 3.29 percent and that of the small bank group was 4.03 percent. This indicates that the NPL of the small bank group is more prone to experiencing non-performing loans during the pandemic. However, this requires further research with a larger sample of banks whether large banks are more efficient, including in managing NPL. This is also to answer the findings of Istinfaranai & Azmi (2020) that the empirical relationship between large banks and small banks regarding efficiency is still problematic.

LDR resulted in a significant value of 0.000 or a very significant difference between large and small banks during the pandemic. The average LDR for the large bank group was 92.51 percent and the small bank group was 89.66 percent. This indicates that small banks are more prone to

experiencing difficulties in disbursing credit. Small banks usually have difficulty reducing credit interest rates because the cost of funds is already high. Research by Fadly & Setianingsih (2020), companies with large assets can use existing resources as much as possible to reach the market. A large bank allows you to benefit from an economic scale (Sienatra, 2020). LDR shows the intermediary financial capacity as well as the level of liquidity

ROA yields a significance value of 0.291 above 0.050, which means that there is no significant difference between the large and small bank groups. The average ROA of large banks is 1.89 percent and 1.39 percent of small banks. Banks have tried their best to pursue profits in various ways by using their total assets. It is different on ROE which results in a significance value of 0.000, which means that there is a very significant difference. The average ROE for the large bank group was 7.77 percent and the small bank group was 4.06 percent. This means that small banks are more vulnerable to a decline in ROE. ROE is a net return on capital, large banks can get a higher net profit because of the ease of diversification (Sienatra, 2020) and the ease of cross-selling (Demirgüt-Kunt et al, 2020) and the freedom to enter the market (Fadly & Setianingsih (2020),

OEIR produces a significance value of 0.182 or above the required value of 0.050, so that OEIR does not differ significantly between large banks and small banks during this pandemic. The average OEOI for the large bank group was 84.08 percent and 77.08 percent for small banks. OEIR is no different. This confirms the findings (Istifanani & Azmi, 2020) that empirical evidence of the relationship between bank size and efficiency is still problematic. OEIR is a ratio that shows efficiency.

Meanwhile, CAR produces a significance value of 0.007 or below the required 0.050 or a very significant difference between large and small bank groups. The average CAR for the large bank group was 21.36 percent and 26.03 percent for small banks, so that the CAR for large banks was relatively vulnerable to a decline during a pandemic. However, banks during the period of the pandemic already had CARs above the stipulated requirement.

## **CLOSING**

In general, there has been a deterioration in performance due to the Covid-19 pandemic but based on the results of the t-test, it can be concluded that only NPL and OEIR are affected, while LDR, ROA, ROE and CAR are not significantly affected which indicates that banks on the Indonesia Stock Exchange are able to control LDR, ROA, ROE and CAR during the pandemic. This is slightly different from the findings of Sutrisno et al (2020) on Islamic banks in Indonesia, which are significantly different in FDR, ROE and NOM but not significantly different in CAR, NPF, ROA and OEIR as well as the findings of Ilhami & Thamrin (2020) on Islamic banks. which did not differ significantly in CAR, ROA, NPF and FDR between before and during the Covid-19 pandemic.

The comparison between the large bank and small bank groups shows a significant difference in NPL, LDR, ROA and CAR which indicates the response of most of the performance of large and small banks. According to Dao and Nguyen (2020), bank size is closely related to the level of profitability, while Nawaz (2019) found that the size of the bank and the number of employees both contribute to the achievement of bank financial performance. This result answers doubts over the findings of Istifanani Azmi (2020) that empirical evidence of the relationship between

bank size and efficiency is still problematic. Considering that the research results show that the most significant influences are NPL and OEOI, it is recommended that banks (both large and small bank groups) are advised to improve credit quality by reducing NPLs, continue to expand credit selectively to reduce the NPL ratio because otherwise expand the NPL ratio to increase credit, improve efficiency and seek non-operating income according to the competence and capacity of the bank.

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