



Analysis of BUKU III bank soundness during the covid-19 pandemic using RGEC method

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ABSTRACT

The Banking industry plays an important role in the economic field. Banks helps circulating money from and to the people. However, because of the COVID-19 Pandemic, the ability of Banks to maintain a stable economy has been tested vigorously. This study aims to find whether BUKU III Banks experienced a difference in their financial performance. This study set up several criteria for its samples and the Banks that meets that criteria are OCBC NISP, BTPN, Permata, Maybank, BTN, Mayapada, Mega, BJB, and Bukopin. This study uses RGEC Method which consists of four indicators, Risk Profile which is proxied by NPL, Good Corporate Governance, Earning, which is proxied by ROE, and Capital which is proxied by CAR. On top of RGEC Analysis, Difference Test was also used to determine whether there was a significant difference in BUKU III Banks' financial performance. This study uses SPSS 25 to process data. The data used in this research is a secondary data obtained from financial statements on the IDX and respective Banks' website. The result of this research shows that Risk Profile, proxied by NPL ratio, did not experienced a significant difference in performance. Good Corporate Governance also did not experience a significant difference in performance. Earning, proxied by ROE, did not showed a significant difference in performance. Lastly, Capital, proxied by CAR, showed significant difference in performance.

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INTRODUCTION

For more than a year, there has been a COVID-19 pandemic The disease caused by this virus ranges from mild to moderate. This disease has the potential to be deadly for the elderly and those suffering from chronic diseases, cancer, diabetes, and cardiovascular disease. According to the World Health Organization (2022), as of November 27, 2021, the number of positive COVID-19 cases has reached 259.502.031 cases, with 5.183.003 cases still pending. The COVID-19 epidemic is one of the most significant shocks to most countries' GDP (Gross Domestic Product) (Echavarría et al., 2020).

According to the (World Bank, 2021), the GDP of industrialized countries such as the United Kingdom fell by 9.8 per cent in 2020. The same pattern was observed in developing countries such

as India, which saw its GDP fall by 7.9 per cent. Indonesia also saw a drop-in economic activity. As of November 27, 2021, Indonesia had 4,255,268 positive cases. There were 143,796 deaths as a result of these instances. According to a report from the Central Statistics Agency (BPS), one of the consequences of this restriction on economic activity is that Indonesia’s GDP will decrease by -2.19 per cent in 2020.

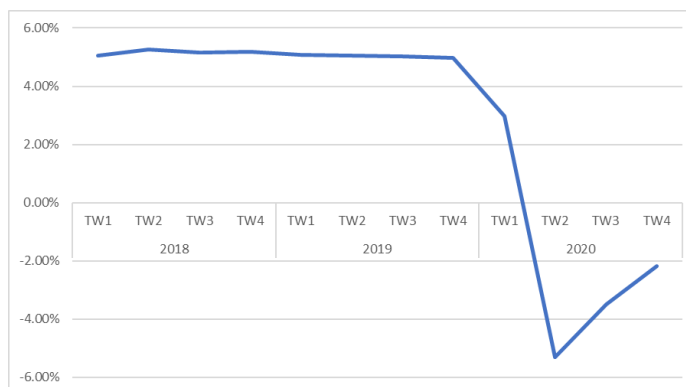


Figure 1. Indonesia GDP Growth
Source: Central Bureau of Statistics (2022)

As a result of banks’ position as intermediate organizations that bridge the distribution of funds in the corporate world, the banking industry has been disrupted due to decreasing supply and demand in the real sector. The drop in demand, which signals a drop in people’s spending power, generates a drop in bank income, threatening bank stability (Perwej, 2020). One of these can be observed in the performance of Indonesian Conventional Commercial Banks (BUK) over the last three years:

Table 1. BUKU Performance Indicator (y-on-y)

RATIO	YEAR		
	2018	2019	2020
CAR	22.97%	23.40% ↑	23.89% ↑
ROA	2.55%	2.47% ↓	1.59% ↓
NIM	5.14%	4.91% ↓	4.45% ↓
BOPO	77.86%	79.39% ↑	86.58% ↑
NPL			
GROSS	2.33%	2.50% ↑	3.06% ↑
NPL NET	1.00%	1.16% ↑	0.95% ↓
LDR	94.78%	94.43% ↓	82.54% ↓

Source: Financial Services Authority (2021)

As seen from the table above, several ratios were used to gauge banks’ financial performance in Indonesia. Some have decreased in performance, like the ROA (Return on Assets) ratio, which measures the level of profitability of a bank. While others like CAR maintained growth. Despite these encounters, there are high expectations that banks will not only survive the shock of the Pandemic, which is clearly not inherent to the financial system but will also become an active part of the broader economic solution, supporting the government’s attempts to combat the receding aspects that affect the economy, caused by the Pandemic.

Analyzing the Bank’s financial statements is one of the initiatives to ensure bank stability. The performance of a company’s financial statements shows the financial health of the associated entity. Accounting is strongly tied to financial statement analysis. A company’s financial accounts can be utilized to make managerial decisions for both internal and external stakeholders. The 2008

economic crisis emphasized the importance of improving the effectiveness of risk management and good corporate governance implementation. The business complexity and bank risk profile had changed, necessitating implementing a new bank soundness assessment system.

Thus in 2011, based on the Circular Letter of Bank Indonesia number 13/24/DPNP of 2011 and Bank Indonesia Regulation number 13/1/PBI/2011, Bank Indonesia has determined how to measure bank health using the Risk-Based Bank Rating (RBBR) approach, both individually and combined. This method measures Risk Profile, Good Corporate Governance (GCG), Profitability (Earnings), and Capital or dubbed as RGEC Method. This invention is expected to assist the bank in identifying problems early and making relevant modifications, as well as implementing stronger Good Corporate Governance (GCG) and Risk Management, allowing the bank to be more robust in coping with crises. As a result, banks are expected to regularly conduct self-assessments on their state of health. Furthermore, Bank Indonesia reviews, analyses, and takes the required supervisory actions.

RESEARCH METHOD

Research Design and Data Collection

The researchers employed a quantitative research approach with a descriptive strategy in this investigation. Quantitative research methods are positivist-based research methods that are used to investigate specific populations or samples, gather data using research equipment, and evaluate quantitative/statistical data with the goal of testing hypotheses that have been developed (Sugiyono, 2017).

The data used in this study is secondary. Secondary sources are data sources that do not directly offer data to data collectors. Secondary data is information that supplements primary data, such as pertinent books, literature, and readings (Sugiyono, 2017). Data for this study were acquired from the Indonesian Stock Exchange (IDX) website and the websites of each Bank in the study's sample. More specifically, the data is derived from bank financial reports.

This study chose BUKU (Commercial Bank Based on Business Activities) Banks, especially BUKU III banks as the population. BUKU Bank is a bank classification based on Business Activities in relation to Core Capital. BUKU III has a core capital of between 5 to 30 trillion Rupiah (Financial Services Authority, 2016). Purposive sampling is utilized because not all samples have criteria that are relevant to the topic under investigation. The purposive sampling technique utilized in this study establishes specific parameters or criteria that the sample must meet (Sugiyono, 2017). The researchers in this study established the following criteria:

1. Bank firms are registered and operating on the Indonesian Stock Exchange (IDX) from 2018 until 2021
2. Bank firms routinely disclose financial reports on IDX or their respective websites
3. Bank firms have a core capital of at least 5 trillion Rupiah from 2018 to 2021, thus making them qualified to be classified as BUKU III.

Table 2. Bank Samples

No.	Name
1	PT Bank KB Bukopin Tbk.
2	PT Bank Tabungan Negara (Persero) Tbk.
3	Bank Pembangunan Daerah Jawa Barat dan Banten Tbk.
4	PT Bank Maybank Indonesia Tbk.
5	Bank Sinarmas Tbk.
6	Bank Permata Tbk.
7	PT Bank BTPN Tbk.

8	PT Bank Mayapada Internasional Tbk.
9	PT Bank China Construction Bank Indonesia Tbk.
10	Bank Mega Tbk.
11	PT Bank OCBC NISP Tbk.
12	PT Bank Woori Saudara Indonesia 1906 Tbk.

Source: Processed data

Data Analysis Method

1. RGEC Analysis

The technique used in this research is by comparing each Bank’s RGEC factor’s performance and their Composite Rating. According to PBI No. 13/1/PBI/2011, the Composite Evaluating of Bank Soundness Level is calculated using a complete and organized examination of the ratings of each factor, as well as the general principles of rating Commercial Bank Soundness Level. The composite rating produced by multiplying each checklist by its weight in percentage is then determined. The following formula is used to compute the weight of each factor:

$$PK = \frac{\text{Sum of composite points}}{\text{Total composite points}} \times 100\% \tag{1}$$

Composite rating is categorized into five rankings, as follows:

- a. Composite Rating 1 (CR 1)
- b. Composite Rating 2 (CR 2)
- c. Composite Rating 3 (CR 3)
- d. Composite Rating 4 (CR 4)
- e. Composite Rating 5 (CR 5)

A lower Composite Rating indicates that the Bank is in a better condition. The composite value of each financial ratio is calculated as follows:

- a. Rating 1 = Every rating 1 added 5 points
- b. Rating 2 = Every rating 2 added 4 points
- c. Rating 3 = Every rating 3 added 3 points
- d. Rating 4 = Every rating 4 added 2 points
- e. Rating 5 = Every rating 5 added 1 points

Then the composite ranking can be determined based on the following weights:

Table 3. Composite Rating Classification

Score	Composite Rating	Description
86-100	CR 1	Very Healthy
71-85	CR 2	Healthy
61-70	CR 3	Fairly Healthy
41-60	CR 4	Less Healthy
<40	CR 5	Unhealthy

Source: Bank Indonesia (2011)

2. Difference Test

To further test whether the Pandemic had an impact to a Bank’s financial performance, this research utilized the Difference Test. The difference test was used on two populations to see if there was a difference in the mean or average of the data gathered. The tests used in this research are Paired Sample T-Test and *Sign-Wilcoxon* Test with the help of SPSS 25 to help with data processing. Analysis of paired samples. T-Test is a parametric test with normally distributed data requirements that pass the homogeneity test, or in other words, pass the basic assumption test. The following are the paired sample T-Test conditions:

- a. If Sig. (2-tailed) < 0,05, then there was significant difference between the two paired samples
- b. If Sig. (2-tailed) > 0,05, then there was no significant difference between the two paired samples

There is also another condition that can be used which is by comparing the t table and t count, as follows:

- a. If $t \text{ count} > t \text{ table}$, then there was significant difference between the two paired samples
- b. If $t \text{ count} < t \text{ table}$, then there was no significant difference between the two paired samples

The *Sign-Wilcoxon* test is a non-parametric test that is used to compare two paired samples. If the data do not match the basic assumptions, the *Sign-Wilcoxon* test is employed to determine whether a difference exists between the paired samples. this test's decision-making criteria are as follows:

- a. If *asymp.sig (2-tailed)* score < 0.05 , then there was significant difference between the two paired samples
- b. If *asymp.sig (2-tailed)* score > 0.05 , then there was no significant difference between the two paired samples.

RESULTS AND DISCUSSIONS

Normality Test

The results of the normality test analysis can be seen in the table below:

Table 4. Kolmogorov-Smirnov Normality Test Result

		N	Test Statistic	Asymp. Sig. (2-tailed)
NPL	Before COVID-19 Pandemic	18	0.196	.067
	After COVID-19 Pandemic	18	0.226	.016
GCG	Before COVID-19 Pandemic	18	0.523	.000
	After COVID-19 Pandemic	18	0.442	.000
ROE	Before COVID-19 Pandemic	18	0.128	.200
	After COVID-19 Pandemic	18	0.331	.000
CAR	Before COVID-19 Pandemic	18	0.118	.200
	After COVID-19 Pandemic	18	0.099	.200

Source: Processed Data

Table 4 shows the results of the Kolmogorov-Smirnov Test, specifically the Test Statistic and Asymp. Sig. (2-tailed). This test is done to determine whether or not the data collected is regularly distributed. If the significance value is higher than the level of significance (0.05) then the data distribution is normal. However, if the significance value is lower than the level of significance (0.05) then the data distribution is not normal. Now based on the results above, only CAR who passed the normality test with Asymp. Sig (2-tailed) of 0.2 before and after COVID-19 Pandemic. Which means, only CAR can be tested with Paired Sample T-Test. Meanwhile NPL, GCG, and ROE did not pass normality test thus it can be tested with Wilcoxon Test.

RGEC Analysis

Table 5. BUKU III Banks RGEC Result (2018-2021)

Bank	Year	RGEC			
		NPL	GCG	ROE	CAR
OCBC NISP	2018	0.82%	1	1.18%	17.63%
	2019	0.78%	1	11.56%	19.17%
	2020	0.79%	1	7.47%	22.04%

	2021	0.91%	1	8.33%	23.05%
	Average	0.83%	1	7.13%	20.47%
BTPN	2018	0.50%	2	8.60%	23.69%
	2019	0.40%	2	7.05%	23.51%
	2020	0.50%	2	5.68%	25.19%
	2021	0.40%	2	6.81%	24.96%
	Average	0.45%	2	7.04%	24.34%
PERMATA	2018	1.70%	2	5.00%	19.40%
	2019	1.30%	2	7.20%	19.90%
	2020	1.00%	2	3.10%	35.70%
	2021	0.70%	2	2.90%	34.90%
	Average	1.18%	2	4.55%	27.48%
MAYBANK	2018	1.50%	2	10.21%	19.04%
	2019	1.92%	2	7.73%	21.38%
	2020	2.49%	2	5.13%	24.31%
	2021	2.56%	2	6.29%	26.91%
	Average	2.12%	2	7.34%	22.91%
BTN	2018	1.83%	2	14.89%	18.21%
	2019	2.96%	2	0.10%	17.32%
	2020	2.06%	2	10.02%	19.34%
	2021	1.20%	2	13.64%	19.14%
	Average	2.01%	2	9.66%	18.50%
MAYAPAD A	2018	3.26%	2	5.75%	15.82%
	2019	1.63%	2	5.92%	16.18%
	2020	1.60%	2	0.58%	15.45%
	2021	2.17%	2	0.35%	14.37%
	Average	2.17%	2	3.15%	15.46%
MEGA	2018	1.27%	2	13.76%	22.79%
	2019	2.25%	2	14.85%	23.68%
	2020	1.07%	2	19.42%	31.04%
	2021	0.81%	2	23.49%	27.30%
	Average	1.35%	2	17.88%	26.20%
BJB	2018	0.90%	2	18.81%	18.63%
	2019	0.81%	2	16.51%	17.71%
	2020	0.41%	2	16.96%	17.31%
	2021	0.41%	2	19.01%	17.78%
	Average	0.63%	2	17.82%	17.86%
BUKOPIN	2018	4.75%	2	2.95%	13.41%
	2019	4.45%	2	3.17%	12.59%
	2020	4.95%	3	-48.67%	12.08%
	2021	4.91%	2	-36.01%	20.26%
	Average	4.77%	2	-19.64%	14.59%

Source: Processed data

The table above shows the results of each bank's RGEC results and averages. Throughout the observed period, OCBC NISP had a rating one or "Very Healthy" NPL and GCG. This indicates that the risk of non-performing loan in OCBC NISP is extremely low but not null. Meanwhile, with a "Very Healthy" GCG it means that the management can follow GCG principles and produced a healthy management system. ROE was rated three or "Fairly Healthy" throughout the observed period meaning

that the Bank's return on the equity is good but not optimal, the last factor is CAR and it was also "Very Healthy" throughout the observed period which means that OCBC NISP are more likely to withstand potential financial downturn and losses.

Next is BTPN, where there are similarities with OCBC NISP. For instance, BTPN's NPL and CAR was classified as "Very Healthy" throughout the observed period. Meanwhile BTPN's GCG was at rating two or "Healthy" throughout the observed period. BTPN's ROE was classified as rating four or "Less Healthy" throughout the observed period. The third Bank is Permata, first their NPL was observed to be "Very Healthy" throughout the observed period. While their GCG stayed at "Healthy" throughout the observed period. Their ROE on the other hand, started with a "Less Healthy" rating in 2018 and later improved to "Fairly Healthy" in 2019 however in 2020 it reverted to "Less Healthy". Lastly, Permata's CAR stayed at "Very Healthy" throughout the observed period.

The fourth Bank is Maybank where it can also be seen that their NPL was "Very Healthy" from 2018 to 2019 however it turned to "Healthy" from 2020 to 2021. Meanwhile GCG stayed at "Healthy" throughout the observed period. Next Maybank's ROE was "Fairly Healthy" throughout the observed period. Unlike other Banks before, BTN Bank their NPL was "Very Healthy" in 2018 then in 2019 it declined to "Healthy", it stayed that way in 2020 even though it did improve and it finally return to "Very Healthy" in 2021. Their GCG rating was also stable at "Healthy" throughout the observed period. BTN's ROE started at "Healthy" in 2018 however it declined significantly to "Less Healthy" in 2019 where BTN recorded that their ROE declined 93% from 2018. The years that followed, BTN managed to improve their ROE and even returned the rating to "Healthy" in 2021. Meanwhile, BTN's CAR stayed stable at "Very Healthy" throughout the observed period.

The sixth Bank is Mayapada where they had a "Healthy" NPL in 2018 then it improved to "Very Healthy" the next year. The NPL slightly improved in 2020 but it returned to "Healthy" in 2021. Like the previous Banks, Mayapada's GCG rating also stayed at "Healthy" throughout the observed period. Meanwhile, their ROE was "Fairly Healthy" during 2018 to 2019 but it dropped to "Less Healthy" in 2020 and it continued to decrease in 2021. This was driven by a significant decrease in their net income, for example their interest income decreased by 41,88% or Rp5,19 trillion. Lastly, their CAR was "Very Healthy" throughout the observed period. The next Bank is Mega and their NPL started at "Very Healthy" and it declined to "Healthy" in 2019 however Mega managed to return it to "Very Healthy" the next year. Next, Mega's GCG stayed at "Healthy" throughout the observed period. Meanwhile Mega's ROE experienced an improvement from "Healthy" during 2018-2019 to "Very Healthy" during 2020-2021. Lastly, Mega's CAR also remained "Very Healthy" throughout the observed period.

The last two Banks are BJB and Bukopin. BJB's NPL, ROE, and CAR stayed constant at "Very Healthy" and their GCG stayed at "Healthy" throughout the observed period. Bukopin's NPL meanwhile started at "Very Healthy" in 2018 however it declined to "Healthy" in 2019 and stayed until the end the observed period. Their GCG had a similar trajectory where they started at "Healthy" in 2018 and in 2020 it declined to "Fairly Healthy" but the next year they regained their "Healthy" rating. For ROE Bukopin started at "Less Healthy" rating and in 2020 it declined to "Unhealthy" where they had a negative ROE. This was driven by Bukopin experiencing a loss in 2020. Lastly their CAR stayed consistent at "Very Healthy" throughout the observed period.

Table 6. BUKU III Banks Composite Rating (2018-2021)

Bank	Year	Points	Composite Rating	
			%	PK
OCBC NISP	2018	18	90%	1
	2019	18	90%	1
	2020	18	90%	1
	2021	18	90%	1
BTPN	2018	16	80%	2

	2019	16	80%	2
	2020	16	80%	2
	2021	16	80%	2
	2018	16	80%	2
PERMATA	2019	17	85%	2
	2020	16	80%	2
	2021	16	80%	2
	2018	17	85%	2
MAYBANK	2019	17	85%	2
	2020	16	80%	2
	2021	16	80%	2
	2018	18	90%	1
BTN	2019	15	75%	2
	2020	16	80%	2
	2021	18	90%	1
	2018	16	80%	2
MAYAPADA	2019	17	85%	2
	2020	16	80%	2
	2021	15	75%	2
	2018	18	90%	1
MEGA	2019	17	85%	2
	2020	19	95%	1
	2021	19	95%	1
	2018	19	95%	1
BJB	2019	19	95%	1
	2020	19	95%	1
	2021	19	95%	1
	2018	16	80%	2
BUKOPIN	2019	15	75%	2
	2020	13	65%	3
	2021	14	70%	2

Source: Processed data

Based off table 6 we can then compile the RGEC results into points. For example, in 2018 OCBC NISP's NPL got rating one, so that is worth five points. OCBC NISP's GCG got rating two, so that is worth four points. Next ROE got rating three and CAR got rating one so it is worth 5 points. That brings it to a sum of 18 Points. Next to get the Bank's Composite Rating, the points then divided by the maximum points one can get which is 20 and then the result gets multiplied 100% to get the result. Because OCBC NISP got a 90% in 2018, it qualified as a CR 1, which is the highest Composite Rating. OCBC NISP managed to keep that rating throughout the observed period.

Now for the result of the rest of the Banks, BJB, like OCBC NISP maintained a CR 1 rating throughout the observed eriod. BTPN, Permata, Maybank and Mayapada had a CR 2 for four years straight. All three Banks seems to not be affected terribly by the Pandemic, at least for the components that were included in this research. While BTN started at CR 1 but it declined to CR 2 for the next two years before returning to CR 1 in 2021. Mega had a strong start for with CR 1 rating however it changed in 2019 where they dropped to CR 2. This decline, was mainly because of. However, they managed to return to CR 1 in 2019 and their rating stayed until the end of the observed period. The last Bank is Bukopin who maintained their Bank's CR 2 from 2018 to 2019, however in 2020 it decreased to CR 3 due to the decrease of their GCG and ROE.

Paired Sample T-Test

Table 7. BUKU III Banks Paired Sample T-Test

	Paired Differences			95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
	CAR Before COVID-19 Pandemic - NPL After COVID-19 Pandemic	-0.04	0.05	0.01	-0.07			

Source: Processed Data

This research uses 95% confidence interval and that means if the Sig. (2-tailed) is lower than 0.05 then there was a significant difference in financial ratio during the Pandemic while if Sig. (2-tailed) is higher then there was no significant difference. Because only CAR ratio passed the normality test, only CAR can be tested with Paired Sample T-Test. Based on the results above, CAR got Sig. (2-tailed) of 0.01 which means CAR was a significant performance difference during the Pandemic.

Sign-Wilcoxon Test

Table 8. BUKU III Sign-Wilcoxon Test

	NPL	GCG	ROE
Z	-0.905	-1	-0.936
Asymp. Sig. (2-tailed)	0.365	0.317	0.349

Source: Processed Data

Similar to the previous test, in Sign-Wilcoxon Test if the Asymp. Sig. (2-tailed) is lower than 0.05 then the performance of the financial ratio was significantly different during the Pandemic and vice versa. In this research NPL, GCG, and ROE was tested using Sign-Wilcoxon because those did not pass the normality test. Based on the test results, NPL had an Asymp Sig. (2-tailed) of 0.37 which means it is higher than 0.05 and NPL's performance was not significantly different during the Pandemic. Meanwhile GCG had an Asymp Sig. (2-tailed) of 0.32 which means it is higher than 0.05 and GCG's performance was not significantly different during the Pandemic. Last is ROE where it had an Asymp Sig. (2-tailed) of 0.35 which means it is also higher than 0.05 and thus ROE's performance was not significantly different during the Pandemic.

CONCLUSION

Based on the tests conducted on NPL which represented Risk Profile, BUKU III Banks did not experienced a significant difference in performance during the COVID-19 Pandemic. Similar case was found for Good Corporate Governance (GCG) where the Sign-Wilcoxon test showed that BUKU III Banks' GCG was not significantly affected during the COVID-19 Pandemic. ROE which represented Earnings also showed no significant difference during COVID-19 Pandemic. Lastly, CAR which represented Capital showed that BUKU III Banks' performance for both components were significantly different during the COVID-19 Pandemic.

The writer realized this research still has its flaws and limitations. For example, the sample used in this research are only BUKU III Banks which cannot be used to represent Banks as a whole and only four ratios were used in this research. For subsequent researchers, expand the scope of the study because this research still finds limitations. Such as expanding ratio or non-ratio indicators.

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