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COMPARATIVE STUDY ON THE FINANCIAL PERFORMANCE OF INDONESIAN COMMERCIAL BANKS DUE TO THE CORONA VIRUS OUTBREAK

Khairina Natsir[1*], Agus Zainul Arifin[1], Sutomo Purwoto[2]

[1]Faculty of Economics and Business, Universitas Tarumanagara, Jakarta - 11470, Indonesia
[2] Post-Graduate Program, Universitas Tarumanagara, Jakarta - 11440, Indonesia
[*]*Email: khairinan@fe.untar.ac.id*

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ABSTRACT

This study intended to find out the differences in banking in Indonesia before and during the Covid-19 pandemic. The population is commercial bank companies listed on the Indonesia Stock Exchange, while the samples selected by purposive technique. The CAMELS method is used to assess banking performance. The data used in this study comes from the 2019-2020 quarterly financial statements. Statistical test using SPSS with Paired T-Test or Wilcoxon Signed-rank Test. In addition, the MANOVA test is used to determine whether there are significant differences in overall banking performance. The findings of this study are the Capital (CAR) has a significant difference in the first quarter of 2019 and 2020, Asset Quality (NPL) proxied by NPL-gross ratio has a significant difference in the second and third quarters, and NPL-net ratio has a significant difference in the fourth quarter, Management Quality (BOPO) have significant differences in the first, second, and third quarters, Earning (ROA) has a significant difference in the second and third quarters, Liquidity (LDR) ratio has a significant difference in the third and fourth quarters. Meanwhile, From the results of the MANOVA test on the performance of commercial banks, overall there is no significant difference due to the corona virus outbreak in Indonesia

Keyword: *CAR, NPL, BOPO, ROA, LDR*

1. INTRODUCTION

The impact of the Covid-19 pandemic on the national economy is currently underway and no one can confirm how deep the impact will be. In the second quarter the economic contraction deepened to minus 5.32%. The economic downturn during the pandemic occurred because many economic activities, especially trade, tourism had stalled. The economic rate of the first quarter of 2020 was recorded at 2.97% or contracted 2.41% compared to the fourth quarter of 2019. [1].

The impact on Banking Sector also accured in ASEAN countries which can be identified from weaker economic growth. This condition could lead to a slowdown in credit growth and lead to a decline in the profitability of the banking industry. Fitch Ratings assesses that banks in Thailand and Singapore, which rely on tourism, are the sectors most affected by Covid-19. Thailand's dependence on tourism has an impact on the SME sector which accounts for 33% of the banking loan portfolio. In addition, the banking sector in Vietnam also experienced a slump due to reduced income from the tourism sector, disruption of the manufacturing supply chain and weakening export demand which in turn weighed on the quality of banking assets in Vietnam. On the other hand, banks in Singapore have also been affected by Covid-19 because 24% of their credit goes to various companies from China which are also experiencing pandemic disruptions [2].

In Indonesia, banking is the heart for the smooth flow of economic activity. Banking has a very strategic role, one of which is as an intermediary institution for the flow of funds from the government to the community or vice versa. In the middle of the Covid-19 pandemic which is still being controlled by government, the banking intermediation function has begun to to grow positively although it is not yet strong [3].

However, in the midst of the ongoing corona virus pandemic, banks are more careful in extending credit. This is due to the high risk of payment failure from creditors because most people, both individuals and companies, are still experiencing a decline in income due to the Corona virus pandemic. Data from the Financial Services Authority in March 2020 shows that there has been an increase in credit risk class 2 and 3 in the banking sector compared to the previous year [4].

In addition to increasing credit risk, the impact of the corona virus pandemic has also more or less affected the performance of other banking fundamentals such as capital where the OJK (2020) recorded a decrease in the Capital Adequacy Ratio (CAR) from the range of 23-24% as of November 2019 to 21.77% as of March. 2020.

Over the past three years, the bank's capital adequacy ratio, also known as CAR, has been stable at above 20%, higher than conditions during the 2008 global crisis, which was in the range of 16-17%. As of January 2020, the CAR has almost reached 23%. However, pressure on banking profitability will be difficult to avoid. The Financial Services Authority (OJK) estimates that banking profits by the end of the year will shrink by around 30-40% compared to last year. The decline in banking profits has been seen in the second quarter of 2020. Throughout April to June 2020, bank profits before tax decreased by 19.8% from last year [5]. In addition, studies by oleh [6] and [7] also found that the COVID-19 pandemic had an impact on national banking liquidity.

Recent research focuses on evaluating the initial impact of the pandemic on consumption, services, finance and investment and some industries. Due to the lockdown and social-distancing policies, the services, travel, tourism, catering and recreation sectors are the most affected. Changes also occurred in consumption patterns from previously being dominated by offline, now starting to switch to online. Ultimately, the COVID-19 pandemic will affect the macro economy. A study conducted by McKibbin and Fernando, concluded that global income decreased by 6.7% in 2020 based on 2019 figures. In addition, spending on government social assistance is becoming a necessity, likely to affect the fiscal balance and national budget [8].

The banking sector is expected to do much to help mitigate the impact of COVID-19 on the real economy. Banks act as a bridge between funding and loan restructuring for borrowers who have a good track record, but are currently experiencing cash difficulties. In order to carry out these functions and roles, banks must of course be in optimal and healthy conditions. For that, we need an indicator that can measure the performance of the banking sector. Based on this background, this study aims to investigate how banking performance compares before the COVID-19 pandemic and during the COVID-19 pandemic on general banking companies listed on the Indonesia Stock Exchange (IDX) using the CAMEL indicator.

2. RESEARCH METHOD

Referring to [9], social change is a variety of accepted ways of life, due to dynamics in geographical conditions, material culture, and ideology, as well as due to diffusion and new discoveries in society. Social change is often found in a society that can indirectly affect the system, values and attitudes of society. The dynamics experienced by the community become the driving force for the community to experience change. These changes can be small changes to big changes that have a big impact. Social change is a variation of the accepted way of life, either due to changes in geographical conditions, culture, population composition, ideology, or new discoveries in society. Social change is not always about progress, it can also take the form of setbacks. However, social dynamics always lead to symptoms of linear transformation. Social change cannot be viewed only from one side. Because one change can lead to changes in other sectors.

The Covid-19 pandemic has caused changes in the social strata of society in Indonesia. These social changes occur very quickly, sporadically or suddenly and unevenly, people are resigned to what is happening to them. This change is highly undesirable by the community, which forces them to accept changes due to the Covid-19 pandemic, of course this can also shake the social values and norms that have been embraced by the community so far. Covid-19 forces people to be adaptive in carrying out social life in the midst of a pandemic. At this time the public is forced to obey all government rules and prohibitions in accordance with health protocol standards. The Covid-19 pandemic causes and paralyzes aspects of the order of people's lives that have been institutionally internalized through patterned and repetitive routines. People are currently being urged by the government to work from home, study from home, and reduce outdoor mobility. In the current pandemic period, people are regulated by the government to do work and study virtually, this is considered very effective in breaking the chain of the spread of Covid-19. (Sanchez, 2020) through [10]

CAMEL ratio analysis is a bank financial analysis and bank performance measurement tool set by Bank Indonesia to find out about the soundness of the bank concerned from various aspects that affect the condition and development of a bank by assessing the factors of assessing the soundness of the bank which include Capital, Assets, Management, Earnings and Liquidity Capital**.** Assessment using the Capital Adequacy Ratio (CAR) is "a bank's performance ratio to measure the adequacy of capital owned by a bank to support assets that contain or generate risks, such as loans. CAR is an indicator of a bank's ability to cover a decline in its assets as a result of bank losses caused by risky assets."

Assets Quality. Assets will be assessed based on the quality of earning assets, namely all assets
invested by the bank in the form of rupiah or with the intention of obtaining income according to its function, such as loans granted by investment in the form of securities and investments. The classification of earning assets is based on the collectibility of earning assets, namely the condition of payment of principal or installments and interest on loans by customers as well as the probability that funds invested in securities and other investments will be received back. The asset quality ratio is one of the main risks faced by banks. As a credit that has the highest risk of default, an increase in the number of Non-Performing Loans / NPLs indicates a decrease in asset quality. The Central Bank regulates that every bank operating in Indonesia must have an NPL of 5% and below [11]. The lower the NPL percentage of a bank, the healthier the bank's business activities. NPL shows the quality of bank credit management and distribution. The better the distribution of loans, the more profits will be obtained from the loan sector. Non-Performing Loan (NPL) is a way to measure the size of the percentage of non-performing loans in a bank. NPL itself can be

calculated in two ways, namely NPL-gross and NPL-net. For NPL gross, it takes into account the categories of substandard loans, doubtful loans and bad loans. Meanwhile, for NPL net, it only takes into account the category of bad loans.

Management. To assess the quality of management can be seen from the quality of humans in managing the bank. Human quality is also seen in terms of education and experience of employees in handling cases that occur.

Earnings. Bank profitability ratio analysis is a tool to analyze or measure the level of business efficiency and profitability achieved by the bank concerned. The profitability ratio analysis of a bank includes Return On Assets (ROA), which is the comparison between the profit before tax on the bank and the total assets of the bank, a ratio that shows the ability of the capital invested in overall assets to generate profits. In addition to ROA is BOPO, which is the ratio between operating costs and operating income, the lower the level of the BOPO ratio means the better the management performance of the bank, because it is more efficient in using existing resources in the company.

Liquidity. Liquidity is the bank's ability to pay all its debts, especially savings deposits, current accounts and time deposits when billed and can also fulfill all credit applications that are eligible to be financed. The liquidity factors assessed in the CAMEL analysis are: a) LDR (Loan to Deposit Ratio) This describes the ability of a bank to repay withdrawals made by customers by relying on loans provided as a source of liquidity. B) Cash Ratio (CR) indicates that the amount of credit disbursed does not exceed the total funds received in order to provide funds for the bank to carry out its operations.

The framework of this study can be figured as follow:

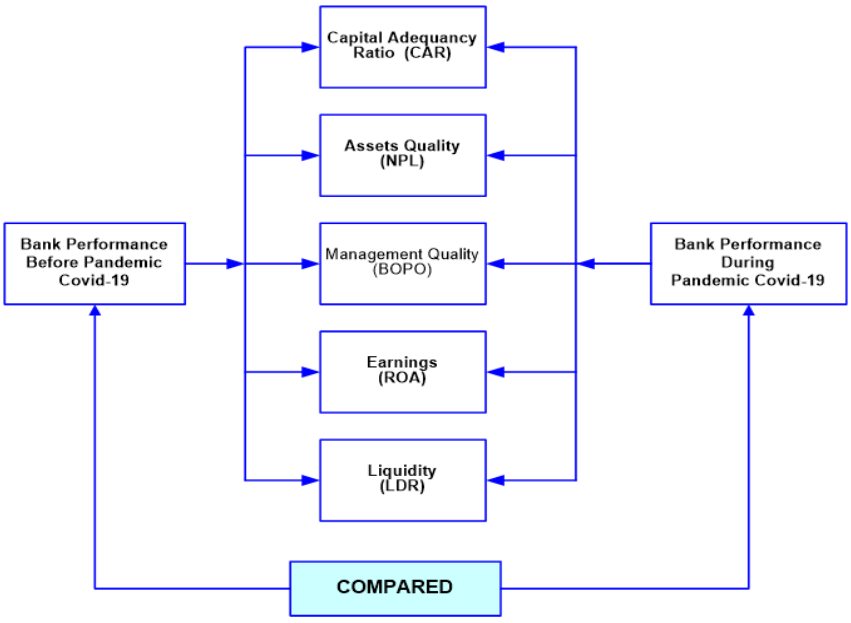

Figure 1. Research Model

Based on the theory that has been described and previous research, the following research hypotheses can be formulated:

H1 : There is a difference in Capital in general banking companies listed on the IDX before and during the Covid-19 pandemic
H2 : There are differences in Assets Quality in general banking companies listed on the IDX before and during the Covid-19 pandemic
H3 : There are differences in Management Quality in general banking companies listed on the IDX before and during the Covid-19 pandemic
H4 : There are differences in Earnings in general banking companies listed on the IDX before and during the Covid-19 pandemic
H5 : There are differences in the Liquidity Ratio in general banking companies listed on the IDX before and during the Covid-19 pandemic
H6 : There are differences in overall company performance in general banking companies listed on the IDX before and during the Covid-19 pandemic

This study was conducted at the Indonesia Stock Exchange (IDX) by extracting the financial reports from the IDX website. The research population is the general banking group and the research sample was selected by purposive sampling method with the criteria of companies including commercial banking sub-sector banking companies listed on the IDX for the 2019-2020 period, excluding Islamic bank groups, and not conducting an IPO during the study period. There are 40 companies that meet the criteria.

The measurement of this research variables is described as follows:

Table 1. Operationalization of Variables

Variable	Operational-Definition	Measurement	Scale
Capital	Ratio of Capital to Total Assets	$CAR = \frac{Capital}{Risk\ Weighted\ Assets}$, (Kasmir, 2014).	Ratio
Assets Quality	Non Performing Loan (NPL)	$NPL\ gross = \frac{(\text{Total Substandard Loans} + \text{Doubtful Loans} + \text{Bad Loans})}{Total\ Loans}$	Ratio
		$NPL\ net = \frac{(\text{Total of Bad Loans})}{Total\ Loans}$	Ratio
Management Quality	Operating Expenses to Operating Income (BOPO)	$BOPO = \frac{Operating\ Expenses}{Operating\ Income}$	Ratio
Earnings	Net Profit to Total Assets	$ROA = \frac{Profit\ before\ tax}{Total\ productive\ Asset}$, Greuning (2005),	Ratio
Liquidity	Total loan to third party deposit ratio	$LDR = \frac{Total\ Credit}{third-party\ funds}$, Dendawijaya (2005),	Ratio

The data analysis used in this research is quantitative descriptive analysis. The tests carried out include:

1) Normality Test. If the sample is not normally distributed, an alternative Wilcoxon Signed Rank Test can be performed.
2) Paired Sample t-test, aims to compare the average of two groups that are paired with each other.
3) The Wilcoxon Signed Rank Test, aims to measure the significance of the difference between two groups of paired data on an ordinal or interval scale but not normally distributed.

4) Multivariate Analysis of Variance (MANOVA) test, used to measure the effect of independent variables on a categorical scale on several dependent variables at the same time on a quantitative data scale.

3. RESULTS AND DISCUSSION

The normality test results are summarized in the following table:

Table 2. Normality Test Result

Ratio	Kolmogorov-Smirnov Normality Test							
	Q-1		Q-2		Q-3		Q-4	
	Sig	Desc.	Sig	Desc.	Sig	Desc.	Sig	Desc.
CAR	0.000	not normally distributed	0.000	not normally distributed	0.000	not normally distributed	0.000	not normally distributed
NPL Gross	0.000	not normally distributed	0.007	not normally distributed	0.001	not normally distributed	0.000	not normally distributed
NPL Net	0.000	not normally distributed	0.007	not normally distributed	0.004	not normally distributed	0.089	Normal distributed
ROA	0.000	not normally distributed	0.001	not normally distributed	0.000	not normally distributed	0.001	Normal distributed
BOPO	0.000	not normally distributed	0.000	not normally distributed	0.000	not normally distributed	0.000	Normal distributed
LDR	0.122	Normal distributed	0.002	not normally distributed	0.000	not normally distributed	0.000	not normally distributed

From Table 2 above, only the LDR in first quarter ratio and the NPL-net in Q-4 ratio have data that are normally distributed. Thus, the comparative test that can be used for this ratio is the Paired Sample T-test. Meanwhile, for other ratios, the data is not normally distributed, so the Wilcoxon Signed Rank Test is used to comparative tool.

Table 3. Summary of Comparison Test Results

Ratio	Comparison Test							
	Q-1: 2019 vs 2020		Q-2: 2019 vs 2020		Q-3: 2019 vs 2020		Q-4: 2019 vs 2020	
	Sig	Desc.	Sig	Desc.	Sig	Desc.	Sig	Desc.
CAR	0.047	significant	0.809	insignificant	0.195	insignificant	0.009	significant
NPL Gross	0.677	insignificant	0.005	significant	0.018	significant	0.809	insignificant
NPL Net	0.397	insignificant	0.788	insignificant	0.972	insignificant	0.016	significant
ROA	0.127	insignificant	0.001	significant	0.000	significant	0.079	insignificant
BOPO	0.036	significant	0.002	significant	0.001	significant	0.143	insignificant
LDR	0.590	insignificant	0.253	insignificant	0.028	significant	0.012	significant

From the comparative test based on first quarter of 2019 vs 2020 financial statements, the results for the CAR and BOPO ratios have significant differences. This is because positive confirmed cases of the Covid-19 pandemic began to appear in Indonesia at the end of the first quarter of 2020. Thus, causing panic in the community, and taking action to withdraw funds stored in banks. The indication is the CAR ratio in the first quarter of 2020 vs the first quarter of 2019, which has a negative (lower) rank of 26 banks. Meanwhile, operating expenses increased and or operating income decreased, as indicated by the BOPO ratio in the first quarter of 2020 vs 2019 which had a positive (higher) rank of 26 banks.

Based on the 2019 vs 2020 quarter II financial statements, the results for the NPL-gross ratio, ROA, and BOPO have a significant difference. This is because in April-May, in order to prevent the spread of Covid-19 cases, a number of local governments imposed Large-Scale Social Restrictions and caused a number of economic activities to be disrupted, which is indicated by the BOPO ratio in the 2nd quarter of 2020 vs the 2nd quarter of 2019 which has a positive (higher) rank of 30 banks. The increased operating expenses and/or decreased operating income of course affects the company's profits to be smaller, indicated by the ratio of ROA in the 2nd quarter of 2020 vs the 2nd quarter of 2019 which has a negative (lower) rank of 28 banks. Meanwhile, NPL-gross ratio is the ratio of non-performing loans that takes into account the categories of substandard loans, doubtful loans and bad loans (arrears > 90 days) to the total loans disbursed. In this case, it means that the number of loans that fall into the category of substandard loans and doubtful loans with a long period of 90-180 days arrears has increased significantly, where indicated by the NPL-gross ratio in the 2nd quarter of 2020 vs the 2nd quarter of 2019 which has a positive (higher) rank of 26 banks.

From the comparative test on the data in the third quarter of 2019 vs 2020, the results for the NPL-gross, ROA, BOPO and LDR ratios have significant differences. This is because the number of positive cases of Covid-19 in Indonesia, whose numbers are still increasing rapidly, has resulted in economic activity that has not yet recovered. The BOPO ratio for the third quarter of 2019 vs 2020 which has a positive (higher) rank is 29 banks. The third quarter ROA ratio of 2019 vs 2020 which has a negative (lower) rank is 29 banks. In addition, the NPL-gross ratio for the third quarter of 2019 vs 2020 which has a positive (higher) rank is 28 banks. With the significant increase in the number of non-performing loans, a number of banks have been more careful in providing loan disbursement to customers. Marked by the LDR ratio in the third quarter of 2019 vs 2020 which has a negative (lower) rank of 29 banks.

Based on the 2019 vs 2020 quarter IV financial statements, the results obtained for the CAR, NPL-net, and LDR ratios have significant differences. This was due to non-performing loans, which were previously categorized as substandard loans (91-120 days in arrears) and doubtful loans (121-180 days in arrears), in the fourth quarter they rose to bad debts (overdue > 180 days). With the significant increase in the number of bad loans, causing a number of banks to be more careful in disbursing loans to customers.The indication is LDR ratio in the 4th quarter of 2020 vs the 4th quarter of 2019 which has a negative (lower) rank of 30 banks. In addition, the bank's capital adequacy ratio also increased, indicated by the CAR ratio for the fourth quarter of 2020 vs the fourth quarter of 2019, which has a positive (higher) rank of 26 banks.

The MANOVA test was carried out to investigate whether there were differences in simultaneous banking ratios (CAR, NPL-gross, NPL-net, ROA, BOPO and LDR) between before and during the Covid-19 pandemic. The test results are presented in the following table:

Table 4. Summary of MANOVA Test Results

Test Type	MANOVA Test							
	Q-1: 2019 vs 2020		Q-2: 2019 vs 2020		Q-3: 2019 vs 2020		Q-4: 2019 vs 2020	
	Sig	Desc.	Sig	Desc.	Sig	Desc.	Sig	Desc.
Pillai's Trace	0.158	insignificant	0.116	insignificant	0.083	insignificant	0.037	significant
Wilks'Lambda	0.158	insignificant	0.116	insignificant	0.083	insignificant	0.037	significant
Hitelling's Trace	0.158	insignificant	0.116	insignificant	0.083	insignificant	0.037	significant
Roy's Largest Root	0.158	insignificant	0.116	insignificant	0.083	insignificant	0.037	significant

From Table 4 above, it can be concluded that banking performance represented by the overall CAR, NPL-gross, NPL-net, ROA, BOPO, and LDR ratio has a significant difference between the fourth quarter of 2019 before the Covid-19 pandemic, compared to the fourth quarter of 2020 during the Covid-19 pandemic.

4. CONCLUSIONS AND SUGGESTIONS

Based on the results of research on the test of differences in the performance of commercial banks listed on the Indonesia Stock Exchange (IDX) during the first quarter to the fourth quarter of 2019-2020, it can be concluded that:

1) Capital (CAR) has a significant difference in the first quarter before and during the pandemic
2) Asset Quality (NPL) proxied by NPL-gross ratio has a significant difference in the second and third quarters, and NPL-net ratio has a significant difference in the fourth quarter
3) Management Quality (BOPO) have significant differences in the first, second, and third quarters
4) Earning (ROA) has a significant difference in the second and third quarters.
5) Liquidity (LDR) ratio has a significant difference in the third and fourth quarters.
6) From the results of the MANOVA test on the performance of commercial banks, overall there is no significant difference due to the brunt of the corona virus in Indonesia

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