

# Financial performance during the COVID-19 pandemic: An analysis of state-owned banks listed on the Indonesia Stock Exchange

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## ABSTRACT

This study aims to obtain empirical evidence regarding the financial performance of state-owned banks using the Capital, Asset quality, Management, Earnings, and Liquidity (CAMEL) methods. The objects in this study are state-owned banks listed on the Indonesian Stock Exchange (IDX) for three years from 2020 to 2022. This study obtained four bank samples: Bank Negara Indonesia (BBNI), Bank Rakyat Indonesia (BBRI), Bank Mandiri (BMRI), and Bank Tabungan Negara (BBTN). The type of research used is qualitative with secondary data sources. Based on the results of the study show that financial performance is reviewed using the CAMEL method in state-owned banks (BUMN), namely BBNI by 88,8 percent, BBRI by 96,45 percent, BBTN by 100 percent, included in the sound condition. In comparison, BMRI by 39,42 percent was included in the unsound condition.

## KEYWORDS

Financial performance; COVID-19 pandemic; state-owned banks; Indonesia Stock Exchange

## ARTICLE HISTORY

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## 1. Introduction

During the COVID-19 pandemic, Indonesian banks will face several possible risks, such as credit, market, and liquidity risks. Therefore, these risks will ultimately impact the financial performance of banks in Indonesia. The financial performance itself is a description of the bank's success and can be interpreted as the results of various activities that have been carried out. It can be explained that financial performance is an analysis conducted to see how much a bank has carried out using the rules of financial implementation properly and correctly (Tanor, 2015). Good financial performance is an advantage for the company in this case. Financial statements

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describe the financial condition of banks arising from transactions or events classified according to the type of transaction or its characteristics and reported in the form of items or items in the financial statements. Assets, liabilities, and equity are essential in measuring a bank's financial position. Business performance measurement is closely related to the profit and loss account, specifically the income and expense account.

CAMEL is a benchmark that is the object of bank examinations conducted by bank supervisors. CAMEL rating below 81 percent indicates a weak financial condition as shown by the bank's balance sheet, such as an increased ratio of noncurrent loans to total assets; banks listed on the watch list are considered to be troubled banks and are inspected more frequently by bank supervisors than non-troubled banks. Banks with CAMEL ratings above 81 percent have solid earnings and few non-current assets; CAMEL ratings are never widely shared. However, the COVID-19 pandemic has also impacted banking companies in terms of net profit/loss.

In 2020, a phenomenon caused one of the state-owned companies, a banking sector company, to experience the impact of COVID-19. Conventional state-owned banks in Indonesia consist of Bank Negara Indonesia, Bank Rakyat Indonesia, Bank Mandiri, and Bank Tabungan Negara. The COVID-19 pandemic has caused the four banks to experience ups and downs. The performance of conventional state-owned banks has decreased by 40 percent throughout 2020. That happened because conventional state-owned banks carried out restructuring to continue to make profits even though they were not as they should have been (cnbcindonesia.com).

Banking companies are also a type of business that relies heavily on public trust, especially users of banking services. Suppose there are issues related to the bank's Unsound performance conditions. In that case, the public will flock to withdraw their funds, worsening the bank's condition. Therefore, banking companies must perform well in all conditions, including during the COVID-19 pandemic, so the bank's function as a financial intermediary institution can run well.

Jacob et al. (2013), regarding the analysis of financial statements using the CAMEL method to assess the level of banking health, found that Capital, assets, management, earnings, and liquidity in the four samples studied showed the results that Bank Mandiri, BRI, BNI were said to be very Sound, while Bank BTN was said to be sound condition. For this reason, we are interested in further researching this phenomenon during COVID-19.

## 2. Literature review

### 2.1. Signaling theory

According to Firdaus (2020), a signal is an action taken by company management that provides clues to investors about how the company views the company's prospects. The relationship between signaling theory and company financial performance in this study is that the analysis of bank financial performance during the COVID-19 pandemic in terms of CAMEL analysis can be a signal for banking companies and parties with an interest in banking companies such as bank service users, investors, and creditors in decision making.

For internal companies, signaling theory can be used as a warning in maintaining the sustainability of the company's business processes, including when facing environmental changes due to certain conditions, such as the COVID-19 pandemic. For external companies, signaling theory can be considered in decision-making. Suppose the results show that banking companies can maintain or improve their performance. In that case, it can provide a good signal, whereas if the results show that they cannot maintain or even decrease their performance, it can provide a wrong signal.

### 2.2. Financial performance

Financial performance is a description of the bank's success and can be interpreted as the results of various activities that have been carried out. It can be explained that financial performance is an analysis carried out to see how much a bank has used the rules of financial implementation properly and correctly (Tanor, 2015). Financial performance measurement is the ability of a bank to use its capital effectively and efficiently (Khikmah et al., 2020).

### *Liquidity Ratio*

According to Ginting (2018), the liquidity ratio, or the working capital ratio, is a ratio used to measure how liquid a bank is. The method compares the components on the balance sheet, namely total current assets with total current liabilities (short-term debt). The assessment can be done for several periods to see the development of the company's liquidity over time.

The objectives and benefits of the liquidity ratio for companies, according to Ginting (2018), are as follows: (a) To measure the company's ability to pay

obligations or debts that are due when collected. That is, the ability to pay obligations due to be paid according to a predetermined deadline schedule (specific dates and months); (b) To measure the company's ability to pay short-term liabilities with current assets as a whole. This means the number of liabilities under one year old or equal to one year, compared to total current assets; (c) To measure the company's ability to pay short-term liabilities with current assets without considering inventories or receivables. In this case, current assets minus inventories and debts are considered lower liquidity; (d) To measure or compare the amount of existing inventory with the company's working capital; (e) To measure how much cash is available to pay debts; (f) As a planning tool, especially about cash and debt planning; (g) To see the condition and position of the bank's liquidity from time to time by comparing it for several periods; (h) To see the weaknesses that the bank has, from each component in current assets and current debt; and (i) To be a trigger tool for management to improve its performance, by looking at the current liquidity ratio.

### *Solvency Ratio*

Solvency is intended to be the ability of a company to pay all its debts, both short- and long-term (Paramita, 2018). According to Ginting (2018), several company objectives using the solvency ratio as follows: (a) To determine the position of the company against obligations to other parties (creditors); (b) To assess the company's ability to meet fixed obligations; (c) To assess the balance between asset values, especially fixed assets and capital; (d) To assess how much bank assets are financed by debt. Furthermore, the benefits of the solvency ratio (leverage ratio) are as follows: (a) To analyze the company's position towards liabilities to other parties; (b) To analyze the company's ability to meet fixed obligations; (c) To analyze the balance between the value of assets, especially fixed assets and capital; (d) To analyze how much bank assets are financed by debt.

### *Activity Ratio*

According to Ginting (2018), the activity ratio measures the company's effectiveness in using its assets. According to Ginting (2018), several company objectives use the activity ratio, namely, as follows: (a) To measure how long it takes to collect receivables during one period or how many times the funds invested in these receivables rotate in one period; (b) To calculate the average days of accounts receivable collection, where the results of this calculation indicate the number of

days the receivables are uncollectible on average; and (c) To calculate how many days the average inventory is stored in the warehouse.

### *Profitability Ratio*

According to Khikmah (2020), rentability or profitability shows the bank's ability to generate profits during a specific period. The profitability ratio provides the final answer for company management because this profitability ratio provides an overview of the effectiveness of bank management.

The objectives of the profitability ratio for banks are as follows: (a) To measure or calculate the profit earned by the bank in a certain period; (b) To assess the bank's profit position in the previous year with the current year; (c) To assess the development of profit over time; (d) To assess the amount of net profit after tax with own capital; (e) To measure the productivity of all bank funds used both loan capital and own capital; (f) To measure the productivity of all bank funds used both own capital.

The benefits of the profitability ratio, according to Ginting (2018), are as follows: (a) Knowing the level of profit earned by the bank in one period; (b) Knowing the bank's profit position in the previous year with the current year; (c) Knowing the development of profit over time; (d) Knowing the amount of net profit after tax with own capital; (e) Knowing the productivity of all bank funds used both loan capital and own capital.

### *2.3. Bank financial statements*

According to Satria (2017) financial statements are information that describes the condition of a bank, which in turn will become information that describes the performance of a bank. Meanwhile, according to Budiman (2021) financial statements are documents that describe the financial position and performance of banks during a certain period of time. The CAMEL method is one method to assess the health level of banks qual.

### *2.4. CAMEL*

The CAMEL method is one method to assess the health level of banks qualitatively and quantitatively based on five aspects: capital, assets, management, earnings, and liquidity. The aspects in CAMEL analysis are the aspects that have the most

substantial influence on the bank's financial condition. Therefore, CAMEL analysis becomes the benchmark for assessing bank health and company performance, which bank supervisors will carry out. Following Bank Indonesia Regulation (2004) No. 6/10/PBI/2004 and Bank Indonesia Circular Letter No.6/23/DPNP concerning the Health Level Assessment System of Commercial Banks, it states that the health level of a bank is the result of an assessment of various aspects that affect the condition or performance of a bank (see Table 1). The CAMEL ratio can describe the relationship between accounts in the financial statements, showing a bank's condition or financial position. A sound bank can undoubtedly provide good banking services to the public (see Table 2).

**Table 1.** The weight of the assessment of the health level of banks by the CAMEL approach

No.	Aspect	Weight (%)
1	Capital adequacy	25
2	Asset quality	30
3	Management efficiency	25
4	Earnings ability	10
5	Liquidity management	10

Source: Bank Indonesia (2004)

**Table 2.** Banking sound level by CAMEL approach

Net value	Status
81 percent - 100 percent	Sound
66 percent - < 81 percent	Fairly sound
51 percent - < 66 percent	Less sound
0 percent - < 51 percent	Unsound

Source: Andriasari & Munawaroh (2020)

## Capital

Capital analysis is a tool to measure the Bank's capital adequacy by comparing Risky Assets. The value of bank capital is measured using the capital adequacy ratio (CAR) (Maolany et al, 2015). The capital adequacy ratio is a ratio that shows the bank's ability to maintain adequate capital and the ability of bank management to identify, measure, monitor, and control emerging risks that can affect the amount of bank capital. The higher the CAR, the higher the availability of capital that can be used to support the needs and anticipate bank risks and vice versa.

Capital is measured by the CAR to obtain empirical evidence related to the bank's ability to maintain adequate capital and the ability of bank management to identify,

measure, supervise, and control the risks that arise can affect the amount of bank capital (Mudrajad, 2011).

### *Asset quality*

This assessment is based on the quality of productive assets owned by the bank and is the ratio of classified asset income to income assets. To measure the level of possible investment recovery Firdaus & Kasmir (2021). Assets are an assessment ratio based on the quality of assets owned by a bank. The ratio measured in this assessment is the ratio of classified earning assets to earning assets (Andriasari & Munawaroh, 2020).

### *Management*

Management is an assessment ratio of a bank based on capital management, asset management, profitability management, liquidity management and general management. Management or processing of a bank will determine whether or not a bank is healthy. So a bank gets a very big attention in assessing its health level.

### *Earning*

Earning is an assessment ratio based on the profitability of a bank or the bank's ability to generate profits. To measure the bank's ability to generate profits, it is measured by Return On Asset (ROA) and operational efficiency ratio (OER).

### *Liquidity*

Liquidity is a ratio used to assess the liquidity of a bank by looking at public financing against funds received by the bank (Mahmudah et al, 2022). Liquidity is also important in bank operations because most of the funds managed by the bank come from the public who are deposited in the form of current accounts, savings, deposits, and other deposits that must be paid at maturity. In addition, banks must also be able to use these funds by allocating them in various forms of investment to generate profits to pay the cost of funds and other operational costs.

Liquidity, which is measured by the Loan to Deposit Ratio (LDR) to obtain empirical evidence regarding the composition of the amount of credit provided compared to the amount of public funds and own capital used (Firdaus & Kasmir, 2021).

## 2.5. Bank health

The Health Level of a Bank is one of the most important aspects that must be known by stakeholders. In simple terms, a healthy bank is a bank that can carry out its function properly in managing funds from the public entrusted to the bank, can carry out its function as an intermediary institution, can help smooth payments, and can be used by the government in implementing its policies, especially monetary policy.

According to Rasyidin (2016), the results of the assessment of bank conditions can be used as a means of determining future business strategies by banks, while for Bank Indonesia it can be used as a means of determining policies and implementing banking supervision. Assessment of the health level of a bank can be done by analyzing the financial statements of the bank. This is because financial statements are a means of providing financial information as a consideration when making decisions (Hafiz, 2018).

To assess a bank's health can be seen from several aspects. This assessment aims to determine whether the bank is in a healthy condition, quite healthy, less healthy and unhealthy, so that Bank Indonesia as a supervisor and coach of banks can provide direction or guidance on how the bank should be run or even stop its operations. Bank health assessments are conducted annually, whether there is an increase or decrease. For banks whose health continues to improve, it does not matter, because that is what is expected and an effort to maintain its health. However, for banks that are continuously unhealthy, they will get direction or sanctions from Bank Indonesia as the supervisor and supervisor of banks.

## 3. Methods

### 3.1. Type of research

The type of research used is a qualitative approach to state-owned banks listed on the IDX using secondary data in the form of Financial Statement data for three years (2020-2022). Researchers seek information from several sources of previous research by collecting financial statement data and measuring the level of bank health at state-owned banks listed on the IDX during COVID-19 using the CAMEL Method. The data analysis technique used in this study is the analysis of banking financial statement data by using the CAMEL approach, namely Capital, Asset Quality, Management, and Earning, according to Bank Indonesia Regulation in



Circular Letter Number 6/23/DPDN/2004, which contains a system for assessing the health level of banks.

3.2. *Sample of research*

The sample is part of the population's number and characteristics (Sugiyono, 2013). The sample used in this study was selected using a sampling technique, namely the Purposive Sample Method. The criteria that must be met to obtain samples in this study are (a) state-owned banks listed on the IDX for three years, 2020-2022, and (b) state-owned banks that provide complete and available financial reports for three years, 2020-2022. Four banks were obtained as samples based on these sample determination criteria (see Table 3).

**Table 3.** List of banks selected as research samples

No.	Bank name	Stock symbol
1	Bank Negara Indonesia	BBNI
2	Bank Rakyat Indonesia	BBRI
3	Bank Mandiri	BMRI
4	Bank Tabungan Negara	BBTN

4. Results and discussion

4.1. *Analysis of the health level of state-owned banks during the Covid-19 pandemic in 2020-2022*

Calculation of bank financial performance using the CAMEL analysis approach at state-owned banks during the co-19 pandemic in Table 4 shows that the level of financial performance from the calculation of bank health levels for three years, namely 2020-2022 at state-owned banks, namely Bank Negara Indonesia, Bank Rakyat Indonesia, Bank Tabungan Negara is in the sound condition, and Bank Mandiri with the unsound condition. From the analysis of the health level of state-owned banks above, the highest CAMEL value of 100 percent with the predicate sound condition was obtained by Bank Tabungan Negara. This aligns with research conducted by Sari (2022), which states that Bank Negara Indonesia, Bank Rakyat Indonesia, and Bank Tabungan Negara are in sound condition. This means that state-owned banks can maintain financial performance during the COVID-19

pandemic. At the same time, the lowest CAMEL value is 39,42 percent, with the unsound condition produced by Bank Mandiri. This is reinforced by the research of Ramadaniar et al. (2013), which states that Bank Mandiri is still less effective and efficient in performance. That is due to the significant value of the OER, one of the CAMEL ratios of 169 percent. The higher the OER value, the worse the bank's performance.

**Table 4.** The results of the analysis of the health level of state-owned banks during the COVID-19 pandemic in 2020-2022

Code	Year	Assessment aspect	Ratio value	Credit ratio	Weight (%)	CAMEL ratio
BBNI	2020	Capital	17.04	171	25	42.75
	2021		20.74	208	25	52
	2022		17.17	173	25	43
	2020	Asset quality	103.74	(-2.86)	30	(-0.85)
	2021		105.72	(-4.91)	30	(-1.47)
	2022		105.20	(-4.37)	30	(-1.31)
	2020	Management	24.76	24.76	25	6.19
	2021		67.67	67.67	25	16.91
	2022		99.36	99.36	25	24.84
	2020	Earning (ROA)	0.57	(-2.86)	10	(-0.28)
	2021		1.30	(-4.91)	10	(-0.49)
	2022		2.20	(-4.37)	10	(-0.43)
	2020	Earning (OER)	180.53	-1.006	10	(-0.10)
	2021		152.90	-661	10	-66
	2022		145.48	-568	10	-56
	2020	Liquidity	84.69	71.42	10	7.14
	2021		72.97	125	10	12.5
	2022		77.45	104	10	10.4
Total CAMEL Score					88.8	
Predicate					Sound	
BBRI	2020	Capital	20.13	202	25	50.5
	2021		17.4	175	25	43.7
	2022		25.53	256	25	64
	2020	Asset Quality	100.55	0.43	30	0.1
	2021		100	1	30	0.3
	2022		100	1	30	0.3
	2020	Management	19.02	19.02	25	4.75
	2021		74.62	74.62	25	18.6
	2022		108.67	108.67	25	27.16

**Table 4.** (continued)

BMRI	2020	Earning (ROA)	1.71	0.43	10	0.04
	2021		2.29	1	10	0.1
	2022		3.46	1	10	0.1
	2020	Earning (OER)	140.34	-504	10	(-50.4)
	2021		184.19	(-1.05)	10	(-0.10)
	2022		173.73	-921	10	(-92.1)
	2020	Liquidity	80.64	90	10	9
	2021		79.87	93	10	9.3
	2022		75.76	112	10	11.2
	Total CAMEL Score				96.45	
	Predicate				Sound	
	2020	Capital	19.5	196	25	49
	2021		19.5	196	25	49
	2022		19.6	197	25	49.25
	2020	Asset Quality	80.9	(-53)	30	-15.9
	2021		101.8	(-0.86)	30	(-0.25)
	2022		100	1	30	0.3
	2020	Management	58.7	58.7	25	14.68
	2021		96.5	96.5	25	24.13
	2022		120.0	120.0	25	30.0
	2020	Earning (ROA)	1.58	20.7	10	2.07
	2021		2.22	(-0.86)	10	(-0.093)
	2022		2.82	1	10	0.1
	2020	Earning (OER)	115	-187.5	10	(-18.75)
	2021		169	-862	10	(-86.2)
	2022		155	-687	10	(-68.7)
	2020	Liquidity	94.6	25.8	10	2.58
	2021		92.0	37.8	10	3.78
	2022		90.5	44.7	10	4.47
	Total CAMEL Score				39.42	
	Predicate				Unsound	
BBTN	2020	Capital	19.33	194	25	48
	2021		19.13	192	25	48
	2022		20.17	202	25	50
	2020	Asset Quality	100.56	0.42	30	0.12
	2021		101.00	(-0.03)	30	(-0.00)
	2022		100.72	0.25	30	0.07
	2020	Management	63.72	63.72	25	15.93
	2021		94.41	94.41	25	23.60
	2022		89.89	89.89	25	22.47

**Table 4.** (continued)

2020	Earning (ROA)	0.62	0.42	10	0.04
2021		0.80	(-0.03)	10	(-0.00)
2022		0.96	0.25	10	0.02
2020	Earning (OER)	271.84	-309	10	(-30.9)
2021		351.51	-425	10	(-42.5)
2022		414.92	-479	10	(47.9)
2020	Liquidity	90.70	43	10	4.3
2021		90.51	44	10	4.4
2022		89.75	48	10	4.8
Total CAMEL Score				100	
Predicate				Sound	

Source: Authors calculation

#### 4.2. Analysis of CAR

In 2020, BBNI generated a CAR value of 17.04 percent. In 2021, the BBNI reached a value of 20.74 percent. In 2022, it experienced a fluctuation of 17.17 percent compared to the previous year, ranking first and indicating a very sound status. In 2020, BBRI generated a CAR value of 20.13 percent. In 2021, the BBRI reached a total of 27.24 percent.

**Table 5.** Calculation of CAR at state-owned banks during the COVID-19 pandemic

Code	Year	CAR				
		Capital (tier 1+ tier 2)	RWA	Ratio percent	Rank	Predicate
BBNI	2020	110.114.602	645.853.819	17.04	1	Very sound
	2021	135.982.323	655.545.739	20.74	1	Very sound
	2022	122.059.730	710.550.455	17.17	1	Very sound
BBRI	2020	197.819.514	982.289.178	20.13	1	Very sound
	2021	177.228.932	1.017.519	17.42	1	Very sound
	2022	185.081.611	1.116.250	16.58	1	Very sound
BMRI	2020	193.564.440	988.801.635	19.57	1	Very sound
	2021	208.203.450	1.064.602.090	19.55	1	Very sound
	2022	236.470.218	1.203.506.671	19.64	1	Very sound
BBTN	2020	24.995.226	129.249.781	19.33	1	Very sound
	2021	25.706.310	134.340.567	19.13	1	Very sound
	2022	28.168.457	139.630.514	20.17	1	Very sound

Source: Authors calculation

In 2022, a consistent annual gain of 25.53 percent resulted in a top-ranked position or a state of very sound condition. In 2020, BMRI generated a CAR value of

19.57 percent. In 2021, BMRI witnessed a decline of 19.55 percent. In 2022, there was a significant gain of 19.63 percent, resulting in a top-ranking position and indicating a very sound condition. In 2020, BBTN generated a CAR value of 19.33 percent. BBTN suffered a 19.13% decline in 2021. In 2022, there was a 20.17 percent growth compared to the previous year, resulting in a top position or a very sound condition (see [Table 5](#)).

### 4.3. Analysis of asset quality

In 2020, BBNI generated an earning asset quality value of 103.74 percent. In 2021, it is 105.72 percent. In 2022, it achieved a rank of four or occupied the less sound condition, resulting in 105.20 percent. In 2020, the earning asset quality value generated by BBRI was 100.55 percent. In 2021, it is ranked at 100 percent; in 2022, it is rated at 100 percent with a rank of four or in a less sound condition. The earning asset quality value generated by BMRI in 2020 is 80.93 percent, with a rank of 2 or occupies the sound condition.

Meanwhile, it reached 101.87 percent in 2021. In 2022, it achieved a perfect score with a rank of 4 or occupied the less sound condition. 100.56 percent of the earning asset quality value was generated by BBTN in 2020. It was 101 percent in 2021. In 2022, it achieved a rank of four or occupied the less sound condition, achieving a result of 100.72 percent (see [Table 6](#)).

**Table 6.** Calculation of Earning Asset Quality at state-owned banks during the COVID-19 Pandemic

Code	Year	Classified Earning Assets (percent)	Total Earning Assets	Ratio	Rank	Predicate
BBNI	2020	3.05	2.94	103.74	4	Less sound
	2021	2.77	2.62	105.72	4	Less sound
	2022	2.02	1.92	105.20	4	Less sound
BBRI	2020	1.82	1.81	100.55	4	Less sound
	2021	1.77	1.77	100	4	Less sound
	2022	1.72	1.72	100	4	Less sound
BMRI	2020	1.91	2.36	80.93	2	Sound
	2021	1.63	1.60	101.87	4	Less sound
	2022	1.09	1.09	100	4	Less sound
BBTN	2020	3.58	3.56	100.56	4	Less sound
	2021	3.02	2.99	101.00	4	Less sound
	2022	2.76	2.74	100.72	4	Less sound

Source: Authors calculation

#### 4.4. Analysis of Management of state-owned banks

In Table 7, BBNi achieved a net profit margin (NPM) of 24.76 percent, indicating a solid financial state and ranking within the top five. In 2021, the condition was rated at 67.67 percent, indicating a fairly sound state. In 2022, a significant increase of 99.36 percent compared to the previous year, indicating a sound condition. In 2020, BBRI achieved an NPM of 19.02 percent, placing it in the top five financial stability rankings. In 2021, the BBRI grew 74.62 percent, indicating a very sound condition and ranking third. However, in 2022, the BBRI saw a significant increase of 108.67 percent, resulting in a rank of one and indicating a very sound state. In 2020, BMRI generated an NPM score of 58.75 percent, placing it in the fourth position or lower regarding sound condition. In 2021, the sound condition of BMRI was 96.55 percent, ranking it second. However, in 2022, BMRI experienced a substantial growth of 120.09 percent, placing it in the top place with a very sound condition. In 2020, BBTN achieved an NPM value of 63.72 percent, placing it in the top four ranks for sound condition. In 2021, the percentage was 94.41, indicating a rank of two or a state of sound condition. In 2022, the percentage decreased to 89.89, maintaining a rank of two or a state of sound condition.

**Table 7.** Calculation of NPM for state-owned banks during the COVID-19 Pandemic

Code	Year	Management				
		Net profit	Operating income	Ratio	Rank	Predicate
BBNI	2020	3.321.442	13.412.581	24.76	5	Unsound
	2021	10.977.051	16.219.699	67.67	3	Fairly sound
	2022	18.481.780	18.599.671	99.36	2	Sound
BBRI	2020	18.660.393	98.099.755	19.02	5	Unsound
	2021	30.755.766	41.215.807	74.62	3	Fairly sound
	2022	51.408.207	47.302.800	108.67	1	Very sound
BMRI	2020	16.799.515	28.594.397	58.75	4	Less sound
	2021	28.028.155	29.028.020	96.55	2	Sound
	2022	41.170.637	34.280.703	120.09	1	Very sound
BBTN	2020	1.602.358	2.514.607	63.72	4	Less sound
	2021	2.376.227	2.516.683	94.41	2	Sound
	2022	2.045.073	2.274.852	89.89	2	Sound

Source: Authors calculation

#### 4.5. Analysis of ROA

BBNI's ROA value in 2020 was 0.57 percent, with a rating of three or fairly sound condition. In 2021, it increased by 1.3 percent from the previous year, and in 2022, it achieved a result of 2.2 percent with a rating of one or very sound condition. In 2020, BBRI generated a ROA value of 1.71 percent. In 2021, the BBRI is 2.29 percent; in 2022, it is 3.46 percent with a rating of one or very sound condition. In 2020, BMRI generated a ROA value of 1.58%. In 2021, it is 2.22 percent. In 2022, it was 2.82 percent, with a rank of one or very sound condition. In 2020, BBTN generated a ROA value of 0.62 percent. In 2021, it is 0.80%. In 2022, it is 0.96 percent, indicating a rank of three or a fairly sound condition (see [Table 8](#)).

**Table 8.** Calculation of ROA at state-owned banks during the COVID-19 Pandemic

Code	Year	ROA				
		Net profit before tax	Total assets	Ratio	Rank	Predicate
BBNI	2020	5.112.153	891.337.425	0.57	3	Fairly sound
	2021	12.550.987	964.837.692	1.30	1	Very sound
	2022	22.686.708	1.029.836.868	2.20	1	Very sound
BBRI	2020	27.612.364	1.610.065.344	1.71	1	Very sound
	2021	38.591.374	1.678.097.734	2.29	1	Very sound
	2022	64.596.701	1.865.639.010	3.46	1	Very sound
BMRI	2020	24.392.405	1.541.964.567	1.58	1	Very sound
	2021	38.358.421	1.725.611.128	2.22	1	Very sound
	2022	56.377.726	1.992.544.687	2.82	1	Very sound
BBTN	2020	2.270.857	361.208.406	0.62	3	Fairly sound
	2021	2.993.320	371.868.311	0.80	3	Fairly sound
	2022	3.875.690	402.148.312	0.96	3	Fairly sound

Source: Authors' calculations

#### 4.6. Analysis of OER

In 2020, BBNI achieved an OER value of 180.53 percent. In 2021, the value reached 152.9 percent. In 2022, it achieved a result of 145.48 percent, ranking fifth or occupying a less sound position. In 2020, BBRI generated an OER value of 140.34 percent. In 2021, the percentage was 184.19. In 2022, it resulted in 173.73 percent, ranking fifth and occupying a less sound position. In 2020, BMRI achieved an OER value of 115.73 percent. In 2021, the percentage was 169.28; in 2022, it decreased to 155.36. This placed it at rank five, indicating a less sound condition. The OER value

generated by BBTN in 2020 is 124.73 percent. In 2021, the value is 134.06 percent. In 2022, the value was 138.37 percent, ranking at number five, indicating a less sound condition (see [Table 9](#)).

**Table 9.** Calculation of OER at state-owned banks during the COVID-19 Pandemic

Code	Year	OER					
		Operating expenses	Operating income	Ratio	Rank	Predicate	Credit value (percent)
BBNI	2020	24.213.756	13.412.581	180.53	5	Unsound	-1.006
	2021	24.800.952	16.219.699	152.90	5	Unsound	-661
	2022	27.059.149	18.599.671	145.48	5	Unsound	-568
BBRI	2020	67.503.849	98.099.755	140.34	5	Unsound	-504
	2021	75.918.108	41.215.807	184.19	5	Unsound	(-1.05)
	2022	82.191.967	47.302.800	173.73	5	Unsound	-921
BMRI	2020	44.530.236	28.594.397	115.73	5	Unsound	-696
	2021	49.140.167	29.028.020	169.28	5	Unsound	-866
	2022	53.260.058	34.280.703	155.36	5	Unsound	-692
BBTN	2020	26.835.902	21.514.607	124.73	5	Unsound	-309
	2021	28.846.522	21.516.683	134.06	5	Unsound	-425
	2022	29.438.880	21.274.852	138.37	5	Unsound	-479

Source: Authors' calculations

#### 4.7. Analysis of banks liquidity

In 2020, BBNI generated an LDR value of 84.69 percent, which ranked it as two or in sound condition. In 2021, the LDR value improved to 72.97 percent, ranking it as one or in very sound condition. In 2022, the LDR value increased to 77.45 percent, maintaining its rank as two or in sound condition. In 2020, BBRI generated an LDR value of 80.64 percent. In 2021, the value of BBRI was 79.87 percent. In 2022, BBRI's performance declined by 75.76 compared to the previous year, resulting in a rank of 2, indicating a stable financial state. In 2020, BMRI generated an LDR value of 94.66 percent. The percentage in 2021 is 92.01%. In 2022, the BMRI experienced a significant decline of 90.5 percent compared to the previous year. It currently holds a level of three, indicating a very stable status. The LDR value produced by BBTN in 2020 is 90.70 percent. The percentage in 2021 is 90.51%. In 2022, the BMRI experienced a significant decline of 89.75 percent compared to the previous year. It obtained a level of three, indicating a fairly sound state (see [Table 10](#)).



**Table 10.** Calculation of LDR at state-owned banks during the COVID-19 Pandemic

Code	Year	LDR				
		Total loans	Deposit	Ratio	Rank	Predicate
BBNI	2020	541.978.801	647.571.744	84.69	2	Sound
	2021	532.141.344	729.168.611	72.97	1	Very sound
	2022	595.854.325	769.268.991	77.45	2	Sound
BBRI	2020	876.977.455	1.087.424.950	80.64	2	Sound
	2021	909.582.789	1.138.743.215	79.87	2	Sound
	2022	990.950.989	1.307.884.013	75.76	2	Sound
BMRI	2020	942.067.687	995.200.668	94.66	3	Fairly sound
	2021	1.026.224.827	1.115.278.713	92.01	3	Fairly sound
	2022	1.172.599.882	1.295.575.929	90.50	3	Fairly sound
BBTN	2020	235.052.116	259.149.814	90.70	3	Fairly sound
	2021	247.285.433	273.189.056	90.51	3	Fairly sound
	2022	266.657.565	297.099.801	89.75	3	Fairly sound

Source: Authors' calculations

## 5. Conclusion

The findings show that of the five banks observed, BBNI, BBRI, and BBTN are in sound condition, demonstrating their ability to sustain and mitigate the adverse impact of the COVID-19 pandemic. In contrast, BMRI is in a less sound financial condition than the other three banks. These factors can be observed by evaluating capital, asset quality, management, profitability, and liquidity.

## Conflict of interest

The authors declare that they have no conflict of interest.

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