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# THE ASSESSMENT OF STATE-OWNED BANK SOUNDNESS USING RGEC METHOD BEFORE AND DURING COVID-19 PANDEMIC

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## *ABSTRACT*

*Covid-19 entered Indonesia in March of 2020, affecting nearly all sectors, including the finance industry. This study aims to analyze the financial performance of state-owned banks in Indonesia (BNI, BRI, Mandiri, and BTN) for the period 2019-2021 using the RGEC (risk profile, gcg, income, and capital) method. According to circular letter of Bank Indonesia (SE BI) no. 13 of 2011, each bank is required to conduct an independent assessment of its financial condition. This study employs a descriptive quantitative methodology. In this research, the purposive sampling method was used. The sample consists of state-owned institutions that have published annual reports from 2018 to 2021 consecutively. Documents and secondary data are the categories and sources of data utilized for this article. Based on the findings of this analysis as a whole, BNI bank has a very healthy predicate in 2018, 2019, and 2021, and a healthy predicate in 2020. BTN bank has a consecutively healthy predicate for the 2018-2021 period, while Mandiri bank and BRI bank have a consecutively very healthy predicate for the 2018-2021 period.*

**Keywords:** *assessment; covid-19; financial; RDEC; state-owned bank's soundness.*

## ABSTRAK

Covid-19 masuk ke Indonesia pada bulan Maret 2020, dan hampir seluruh sektor yang ada di Indonesia terkena dampaknya, termasuk sektor perbankan. Tujuan dari penelitian ini untuk menganalisis kinerja keuangan dari bank BUMN di Indonesia (BNI, BRI, Mandiri, dan BTN) pad periode 2019-2021 dengan metode RGEC (profil risiko, gcg, pendapatan, dan modal). Sesuai dengan SE BI no. 13 tahun 2011, setiap bank perlu melakukan penilaian mandiri atas kesehatan banknya. Penelitian ini menggunakan pendekatan kuantitatif deskriptif. Metode *purposive sampling* digunakan dalam penelitian ini. Sampel yang digunakan yaitu bank BUMN yang mempublikasikan laporan tahunan pada periode 2018-2021 secara berturut-turut. Tipe dan sumber data yang digunakan dalam artikel ini yaitu dokumen dan data sekunder. Hasil dari penelitian ini secara keseluruhan, bank BNI memiliki predikat sangat sehat pada tahun 2018, 2019, dan 2021, sedangkan pada tahun 2020 memiliki predikat sehat. Untuk bank BTN memilki predikat sehat secara berturut-turut pada periode 2018-2021, dan bank Mandiri juga bank BRI memiliki predikat sangat sehat secara berturut-turut pada periode 2018-2021.

**Kata Kunci:** asesmen; Covid-19; finansial; RGEC; tingkat kesehatan bank bumn.

## INTRODUCTION

Banks are business companies that gather monies from the public in the form of deposits and route them to the public in the form of credit and/or other forms in order to better the lives of many people (Amendment to Banking Law Number 7 of 1992, 2017). Banks as agents of trust, agents of development, and agents of service, it may be claimed that the foundation of bank operations is trust, both trust between the community and the bank and trust between the bank and the community. Banks provide services based on trust: they accept money from customers and reinvest it as credit to create a spread, which is the bank's income. Banks are business companies that gather monies from the public in the form of deposits and route them to the public in the form of credit and/or other forms in order to better the lives of many people (Amendment to Banking Law Number 7 of 1992, 2017). Banks as agents of trust, agents of development, and agents of service, it may be claimed that the foundation of bank operations is trust, both trust between the community and the bank and trust between the bank and the community. Banks provide services based on trust: they accept money from customers and reinvest it as credit to create a spread, which is the bank's income.

The banking sector plays a significant role in driving a country's economy, where the good and poor performance of banks can influence the flow and condition of an economy, including Indonesia's (Dermawan & Desiana, 2019). Failure of a commercial bank will have far-reaching effects on the economy, as it can trigger a financial crisis that can morph into an economic crisis. Therefore, the relevant authorities, in this case Bank Indonesia (BI) and the Financial Services Authority (OJK), see the need to supervise the banking industry, one of which is to assess the health level of banks, as stipulated in POJK Number 4 / POJK.03 / 2016 concerning Assessment of the Health Level of Commercial Banks, so that public confidence in banks can be maintained. In addition, the bank's health level is used to evaluate the bank's conditions and problems and to determine corrective action by the bank and supervisory action by the Financial Services Authority in order to surmount bank weaknesses or problems.

BI through BI Circular Letter no.13 of 2011 requires that each bank implement a risk management-based bank soundness assessment that includes Risk Profile, Good Corporate Governance (GCG), Earnings, and capital. In this case, OJK strengthens Bank Indonesia's statement through POJK no.4 of 2016 concerning Bank Health Level Assessment that in order to increase the effectiveness of bank health level assessment to deal with changes in business complexity and risk profiles of both banks and companies under the auspices of banks, banks need to implement a risk management-based self-assessment system. The results of the bank health assessment can be used as a tool for planning future strategies and planning, while for customers or the public it can be used as a monitoring tool given that customers have entrusted the management of their funds to the bank, while investors can use the results as a tool to obtain sufficient information about the performance of bank management, such as their ability to obtain profits or profits. (Wulandari, 2018).

Indonesia's banking industry faces risks from disruptions to the stability of the open financial system, one of which is the emergence of the COVID-19 pandemic (Juanaristo & Astika, 2022). According to Statistics Indonesia, Indonesia's economic


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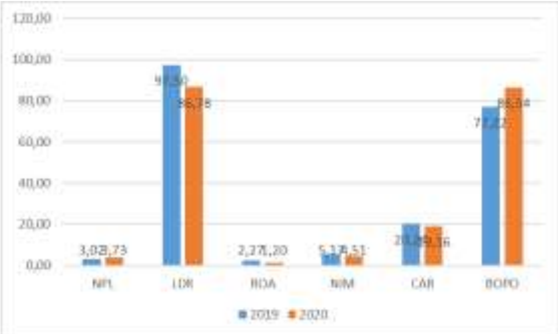
growth (year on year) was 2.97 percent before the discovery of the Covid-19 virus in the first quarter of 2020. However, after the announcement in March 2020 that the first Covid-19 virus patient had been found, Indonesia's economic growth (year on year) contracted in the second, third, and fourth quarters of 2020, reaching -5.32 percent in the second quarter, -3.49 percent in the third quarter, and -2.17 percent in the last quarter (Pertiwi, 2022).




Source: Data processed (2023)

Figure 1. The Condition of State-Owned Banks Before and During the Pandemic

The financial sector is one of those under attack as a result of the COVID-19 epidemic (Pertiwi, 2022). Despite the effects of Covid-19, the banking sector's resilience is still strong. This may be observed in the Capital Adequacy Ratio (CAR), which was 19.16% in 2020, a 1.08% decline from 20.24% in 2019. Furthermore, the income represented by Return on Assets (ROA) in 2020 has a value of 1.20%, down 1.07% from 2019's value of 2.27%, and Net Interest Margin (NIM) in 2020 has a value of 4.51%, down 0.66% from 2019's value of 5.17%.

The Operating Cost to Operating Income (BOPO) metric increased by 9.32% in 2020, from 77.22% in 2019 to 86.54% in 2020. The bank's ability to issue credit as measured by the Loan to Deposit Ratio (LDR) indicator fell by 10.72% in 2020, to 86.78% from 97.50% in 2019. Bank credit quality grew by 0.71% in 2020 to 3.73%, up from 3.02% in 2019. Healthy banks may sustain public trust, act as intermediates, help smooth payment flows, and can be used by the government to conduct various policies, including monetary policy (Baihaqi & Yulianti, 2020).

This study will concentrate on four Indonesian state-owned banks: PT Bank Negara Indonesia (Persero) Tbk, PT Bank Rakyat Indonesia (Persero) Tbk, PT Bank Mandiri (Persero) Tbk, and PT Bank Tabungan Negara, Tbk. Banks BRI, BNI, BMRI, and BBTN were chosen as research objects because they are government-owned financial institutions that played an essential role in promoting and preserving the Indonesian economy during the global crisis (Juanaristo & Astika, 2022). According to (Octaviani & Saraswati, 2018), state-owned commercial banks have a huge number of assets, capital, and liabilities; in fact, they have the biggest overall amount of assets, capital, and liabilities in the Indonesian banking system. State-owned banks offer numerous benefits over commercial banks, according to Aviliani (2020), Chairperson of the Perbanas Research and Development Division. According to Aviliani (2020), consumers feel psychologically secure keeping their money in state-owned institutions. 2020 (IPOTNEWS).

Some studies are similar to analyzing bank health using the RGEC method such as analyzing the improvement of bank health levels for the period 2012-2016 (Octaviani & Saraswati, 2018), analysis of the level of bank health with the RGEC method at PT BNI for the period 2013-2017 (Handayani & Mahmudah, 2020), comparison of bank health level assessment using the RGEC method for the period 2016 (Wulandari, 2018), analysis of bank health with the RGEC method at PT Bank Mandiri for the period 2014-2017 (Solihati, 2019), analysis of bank health and potential financial distress using the RGEC method on BTPN Syariah for the period 2014-2018 (Ardyanfitri et al., 2019), analysis of bank health in state-owned banks in Indonesia using the rgec method for the period 2011-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2015 (Azeharie et al., 2017), analysis of the level of bank health with the RGEC method at Pt Bank Mandiri for the period 2015-2018 (Maramis, 2020) the effect of bank health level using the RGEC method on the profit growth of banking companies (Baihaqi & Yulianti, 2020). Thus, the novelty of this research is comparing the assessment of soundness between state-owned bank before and during covid-19 pandemic using RGEC method with longer duration of research.

Based on the background description above, the researcher formulates a research question, namely how the health level of state-owned banks before and when the covid-19 pandemic occurred. The purpose of this study is to determine how the health of banks when before and when affected by the covid-19 pandemic using the RGEC method.

The RGEC method is a framework for assessing the health of the banking system based on risk-oriented, proportional, material, significant, comprehensive, and structural criteria (Juanaristo & Astika, 2022) which includes Risk Profile, Good Corporate Governance (GCG), Earnings, and capital. Risk Profile is an assessment of inherent risk and the quality of risk management implementation in bank operational activities (Arrizky, 2022). It includes credit risk, market risk, operational risk, liquidity risk, legal risk, strategic risk, compliance risk and reputation risk (Solihati, 2019). This study uses LDR and NPL to represent risk profile. (Pertiwi, 2022), GCG is bank governance that applies the principles of transparency, accountability, responsibility, independence, and fairness (Pradnyani & Artini, 2023). GCG are measured by self-assessment results (Kansil et al., 2020), Earning is a profitability factor used to measure the level of efficiency and profitability of Islamic Commercial Banks achieved by the bank concerned in a certain period (Taram & Isfandayani, 2022). ROA and NIM to represent earnings (Azeharie et al., 2017). Capital is an indicator of the bank's ability to cover a decrease in its assets as a result of bank losses caused by risky assets (Candera et al., 2021). CAR as a representation of Capital (Permana & Sudirman, 2021).

This research is aimed to contribute to academic research or existing literature on bank health analysis by providing an understanding of how bank health is employed as a meaningful and good performance criterion. Furthermore, this research is expected to raise knowledge and transparency about the financial health of state-owned banks, with the information supplied assisting the public, investors, and regulators in objectively understanding and monitoring the financial performance of banks. In addition, this information also helps the public to choose banking services that they think are suitable, and also for investors to consider in making investment decisions.

## RESEARCH METHODS

To assess the health of state-owned commercial banks, descriptive research is used to explain the RGEC ratio, while quantitative research is utilized to compute the percentage of RGEC ratios based on yearly reports from 2019 to 2022. The technique used in the analysis is based on Bank Indonesia Circular Letter No. 13 of 2011 regarding the RGEC Commercial Bank Health Level Assessment. The following are the steps for measuring the health of banks based on each criteria and its components: (1) Gathering data for this research. (2) Using a matrix of criteria, rank the LDR, NPL, GCG, ROA, NIM, and CAR ratios of state-owned banks. (3) Establishing a composite score to evaluate the health of state-owned banks from 2020 to 2021. Each checklist for Rank 1 will be multiplied by 5 points; each checklist for Rank 2 will be multiplied by 4 points; each checklist for Rank 3 will be multiplied by 3 points; each checklist for Rank 4 will be multiplied by 2


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points; and each checklist for Rank 5 will be multiplied by 1 point. (4) The composite rating is calculated by multiplying each checklist by the percentage. The weight or percentage of the total composite rating is calculated using the following formula:

$$\textit{Composite Rating} = \frac{\textit{Total Composite Value}}{\textit{Overall Total Composite Value}} \; X \; 100\%$$

Based on SE BI No. 13/2011, the weight or proportion to determine the composite rating is as follows:

Table 1. Composite Rating Criteria Matrix

| Weight | Rating | Predicate |
|---|---|---|
| 86 – 100 | PK 1 | Very Healthy |
| 71 – 85 | PK 2 | Healthy |
| 61 – 70 | PK 3 | Fairly Healthy |
| 41 – 60 | PK 4 | Less Healthy |
| < 40 | PK 5 | Not Healthy |

Source: SE BI No. 13 Tahun 2011.

The description for each ratio in analyzing bank health can be seen from this table:

Table 2. Variable Operationalization

| No | Variable | Indicator | Scale |
|---|---|---|---|
| 1 | NPL | $\frac{\text{Non-Performing Loans}}{\text{Total Credit}}$ | Rasio |
| 2 | LDR | $\frac{\text{Total Credit}}{\text{Third Party Funds}}$ | Rasio |
| 3 | GCG | Self Assesment | - |
| 4 | ROA | $\frac{\text{Profit Before Tax}}{\text{Average Total Assets}}$ | Rasio |
| 5 | NIM | $\frac{\text{Net Interest Income}}{\text{Average Total Earning Assets}}$ | Rasio |
| 6 | CAR | $\frac{\text{Capital}}{\text{ATMR}}$ | Rasio |

Sumber: SE BI No. 13 Tahun 2011.

This study's population consists of all Indonesian banks. Purposive sampling was used to gather the sample for this study. This study's sample includes PT Bank Negara Indonesia (Persero) Tbk, PT Bank Tabungan Negara (Persero) Tbk, PT Bank Rakyat Indonesia (Persero) Tbk, and PT Bank Mandiri (Persero) Tbk, which are all listed on the Indonesia Stock Exchange.

Documents and secondary data are the types and sources of data used in this study. Journals, letters, meeting minutes, memos, and program reports are examples of documentary data (Pertiwi, 2022). Data gathered from the websites of PT Bank Negara Indonesia (Persero) Tbk, PT Bank Tabungan Negara (Persero) Tbk, PT Bank Rakyat Indonesia (Persero) Tbk, and PT Bank Mandiri (Persero) Tbk for the 2019-2022 period.

## RESULTS AND DISCUSSION

### *Risk Profile*

This study employs LDR and NPL to assess the risk profile of state-owned banks. Liquidity risk is the danger that happens when consumers or users of banking services withdraw their money at the same time, causing banks to fail (Mar'atus & Sukoco, 2022). Figure 2 shows that prior to the pandemic, the bank with the highest LDR level in 2018 was BTN bank at 103%, while the lowest was BNI bank at 88.80%, and in 2019, the greatest LDR level was still BTN bank with a value of 113.5%, with BRI bank having the lowest value of 88.64%. When the pandemic hit, each bank's LDR reduced marginally; however, it can still be shown in Figure 2 that in 2020, BTN bank's LDR decreased dramatically from 113.5% in 2019 to 93.19% in 2020 and 92.86 in 2021. The lowest value in 2020 was 82.95% by Bank Mandiri and 79.70% by Bank BNI in 2021.


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Source: Data processed (2023)

Figure 2. LDR at BUMN Banks for the 2018-2021 Period

A bank may not be able to generate profits if the LDR ratio is too low and if the higher the LDR indicates the greater the use of deposits for lending and the bank has been able to carry out its intermediary function optimally, but if it is too high it will also cause liquidity risk for the bank. (Azeharie et al., 2017).

Based on table 3, it can be seen that there were fluctuations up and down before and during the pandemic in the LDR ratio of state-owned banks. Even during the covid-19 pandemic, bank BRI and bank Mandiri were still able to maintain their LDR levels in the healthy category, and also bank BNI in 2021 received a healthy category after previously receiving a fairly healthy predicate in 2020. This means that they, especially in 2021, have been able to manage their assets and liabilities properly and effectively. Even so, each state-owned bank experienced a decrease in LDR scores, such as bank BTN which in 2019 scored 113.50% with a predicate of less healthy, in 2020 and 2021 it decreased to 93.19 and 92.86 respectively where bank BTN in that year received a fairly healthy predicate, meaning that bank BTN has begun to be able to manage their assets and liabilities well but still needs to be improved in order to be able to get a healthy predicate.

Table 3. LDR in BUMN Banks for the Period of 2018-2021d

| Banks | Year | LDR | Criteria | Rating | Predicate |
|---|---|---|---|---|---|
| BNI | 2018 | 88,80 | 85% < LDR < 100% | PK 3 | Healthy Enough |
| | 2019 | 91,50 | 85% < LDR < 100% | PK 3 | Healthy Enough |
| | 2020 | 87,30 | 85% < LDR < 100% | PK 3 | Healthy Enough |
| | 2021 | 79,70 | 75% < LDR < 85% | PK 2 | Healthy |
| BTN | 2018 | 103,49 | 100% < LDR < 120% | PK 4 | Less Healthy |
| | 2019 | 113,50 | 100% < LDR < 120% | PK 4 | Less Healthy |
| | 2020 | 93,19 | 85% < LDR < 100% | PK 3 | Healthy Enough |
| | 2021 | 92,86 | 85% < LDR < 100% | PK 3 | Healthy Enough |
| Mandiri | 2018 | 96,74 | 85% < LDR < 100% | PK 3 | Healthy Enough |
| | 2019 | 96,37 | 85% < LDR < 100% | PK 3 | Healthy Enough |
| | 2020 | 82,95 | 75% < LDR < 85% | PK 2 | Healthy |
| | 2021 | 80,04 | 75% < LDR < 85% | PK 2 | Healthy |
| BRI | 2018 | 89,57 | 85% < LDR < 100% | PK 3 | Healthy Enough |
| | 2019 | 88,64 | 85% < LDR < 100% | PK 3 | Healthy Enough |
| | 2020 | 83,66 | 75% < LDR < 85% | PK 2 | Healthy |
| | 2021 | 83,67 | 75% < LDR < 85% | PK 2 | Healthy |

Source: Data processed (2023)

NPL is used to measure the bank's ability to maintain the risk of failure to return credit by debtors, the smaller the NPL, the smaller the credit risk borne by the bank (Kusmayadi, 2017). Figure 3 shows that before the pandemic, the bank with the highest NPL rate in 2018 was by BTN bank


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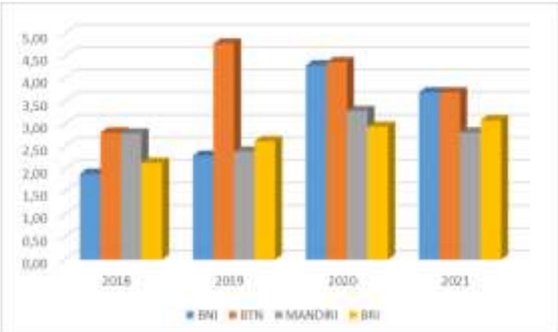
at 2.81%, while the lowest was BNI bank which had an NPL rate of 1.90%, and in 2019 the highest NPL rate was still by BTN bank with a value of 4.78%, with the lowest value of 2.30% by BNI bank. Meanwhile, during the pandemic, the NPL of each bank fluctuates slightly, it can be seen still in Figure 3 that in 2020, bank BTN decreased quite drastically from 4.78% in 2019 to 4.37% in 2020 and 3.70% in 2021. Meanwhile, bank BNI, bank Mandiri, and BRI experienced an increase after experiencing a pandemic, respectively in 2020 of 4.30%, 3.29%, and 2.94%, and in 2021 of 3.70% and 3.08% for bank BNI and bank BRI, while bank Mandiri decreased again to 2.81%.




Source: Data processed (2023)

Figure 3. NPL at BUMN Banks for the 2018-2021 Period

Bad debts arise due to the inability to make principal and interest payments which have an impact on the decline in the work of financial institutions and make financial institutions less efficient (Sirait et al., 2021). The smaller the NPL ratio, the better the asset quality of a bank (Samanto & Hidayah, 2020). Based on table 4, it can be seen that each state-owned bank both before and during the pandemic has a healthy predicate, although there are fluctuations but still in the healthy category, except for BNI bank in 2018 which has a very healthy predicate. This means that each state-owned bank has been able to manage the quality of credit provided by selecting prospective debtors so that the number of loans classified as substandard, doubtful, and loss is reduced (Juanaristo & Astika, 2022).

Table 4. NPL at BUMN Banks for the 2018-2021 Period

| Banks | Year | NPL | Criteria | Rating | Predicate |
|---|---|---|---|---|---|
| BNI | 2018 | 1,90 | 0% < NPL < 2% | PK 1 | Very Healthy |
| | 2019 | 2,30 | 2% < NPL < 5% | PK 2 | Healthy |
| | 2020 | 4,30 | 2% < NPL < 5% | PK 2 | Healthy |
| | 2021 | 3,70 | 2% < NPL < 5% | PK 2 | Healthy |
| BTN | 2018 | 2,81 | 2% < NPL < 5% | PK 2 | Healthy |
| | 2019 | 4,78 | 2% < NPL < 5% | PK 2 | Healthy |
| | 2020 | 4,37 | 2% < NPL < 5% | PK 2 | Healthy |
| | 2021 | 3,70 | 2% < NPL < 5% | PK 2 | Healthy |
| Mandiri | 2018 | 2,79 | 2% < NPL < 5% | PK 2 | Healthy |
| | 2019 | 2,39 | 2% < NPL < 5% | PK 2 | Healthy |
| | 2020 | 3,29 | 2% < NPL < 5% | PK 2 | Healthy |
| | 2021 | 2,81 | 2% < NPL < 5% | PK 2 | Healthy |
| BRI | 2018 | 2,14 | 2% < NPL < 5% | PK 2 | Healthy |
| | 2019 | 2,62 | 2% < NPL < 5% | PK 2 | Healthy |
| | 2020 | 2,94 | 2% < NPL < 5% | PK 2 | Healthy |
| | 2021 | 3,08 | 2% < NPL < 5% | PK 2 | Healthy |

Source: Data processed (2023)

***Good Corporate Governance***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GCG factor assessment is an assessment of the quality of bank management in terms of the implementation of GCG principles as outlined in Bank Indonesia Regulations based on three main factors, namely governance structure, governance process, and governance outcomes (Juanaristo & Astika, 2022). GCG implementation is important in a company because it can be a good image and will attract attention from stakeholders, such as for investment. The implementation of GCG itself has five principles, namely openness, accountability, responsibility, independence, and fairness (Gultom & Siregar, 2022).

Table 5 shows that bank Mandiri has a very healthy predicate both before the pandemic and during the pandemic, followed by bank BNI, bank BTN, and bank BRI which have a healthy predicate. These four state-owned banks show that their management has been able to implement GCG in accordance with SE BI no.13 of 2011.

Table 5. GCG in SOE Banks for the 2018-2021 Period

| Banks | Year | GCG | Criteria | Rating | Predicate |
|---|---|---|---|---|---|
| BNI | 2018 | 2,00 | 1,5 < GCG < 2,5 | PK 2 | Healthy |
| | 2019 | 2,00 | 1,5 < GCG < 2,5 | PK 2 | Healthy |
| | 2020 | 2,00 | 1,5 < GCG < 2,5 | PK 2 | Healthy |
| | 2021 | 2,00 | 1,5 < GCG < 2,5 | PK 2 | Healthy |
| BTN | 2018 | 2,00 | 1,5 < GCG < 2,5 | PK 2 | Healthy |
| | 2019 | 2,00 | 1,5 < GCG < 2,5 | PK 2 | Healthy |
| | 2020 | 2,00 | 1,5 < GCG < 2,5 | PK 2 | Healthy |
| | 2021 | 1,55 | 1,5 < GCG < 2,5 | PK 2 | Healthy |
| Mandiri | 2018 | 1,00 | GCG < 1,5 | PK 1 | Very Healthy |
| | 2019 | 1,00 | GCG < 1,5 | PK 1 | Very Healthy |
| | 2020 | 1,00 | GCG < 1,5 | PK 1 | Very Healthy |
| | 2021 | 1,00 | GCG < 1,5 | PK 1 | Very Healthy |
| BRI | 2018 | 2,00 | 1,5 < GCG < 2,5 | PK 2 | Healthy |
| | 2019 | 2,00 | 1,5 < GCG < 2,5 | PK 2 | Healthy |
| | 2020 | 2,00 | 1,5 < GCG < 2,5 | PK 2 | Healthy |
| | 2021 | 2,00 | 1,5 < GCG < 2,5 | PK 2 | Healthy |

Source: Data processed (2023)

***Earning***

In measuring bank performance, this study uses ROA and NIM ratios. ROA itself is defined as a ratio that shows the company's ability to earn profits compared to total resources or average assets (Pertiwi, 2022). The greater the ROA value, the better the bank's financial performance because the rate of return will be greater (Dermawan & Desiana, 2019).

In Figure 4, it can be seen that the ROA ratio fluctuates quite a bit each year and even tends to decrease both before and during the pandemic. For example, in 2018 and 2019, the highest ROA value was held by BRI bank with 3.68% and 3.50% respectively, despite experiencing a decline. Meanwhile, during the pandemic in 2020, it decreased and increased again in 2021, BRI's ROA value decreased further to 1.98 and increased to 2.72%. Meanwhile, the lowest in 2018, 2019, and 2021 was held by BTN bank, which amounted to 1.34; 0.13; and 0.81 respectively. Meanwhile, in 2020 the lowest ROA value is held by bank BNI with a value of 0.50.


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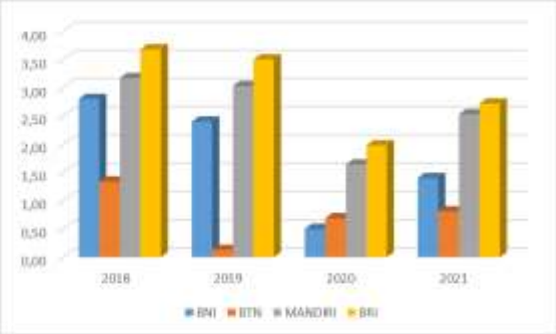


Source: Data processed (2023)

Figure 4. ROA at BUMN Banks for the 2018-2021 Period

In table 6, it is shown that state-owned banks both before and during the pandemic are still able to maintain their ability to generate profits, although there is a slight decrease in ROA value but not all have changed from the composite predicate of earnings assessment. In 2018-2022, bank BRI and bank Mandiri were able to maintain their ability and remain in composite rank 1 with a very healthy predicate. In contrast, bank BNI and bank BTN initially decreased before the pandemic but began to increase again in 2021.

The high level of ROA then puts the bank in an efficient asset management position in order to obtain profit (Pertiwi, 2022). The decline in the ROA ratio from before the pandemic to during the pandemic was due to the results of credit restructuring carried out in several banks (Ariyani, 2020). Meanwhile, the increase in the ROA ratio during the pre-pandemic period was generally due to a significant increase in pre-tax profit (Maramis, 2020).

In addition to ROA, the NIM ratio is used to measure the earnings of the bank, given that the bank's operating income is highly dependent on the difference between the interest rate on deposits received and the interest rate on loans, this NIM ratio is used to measure the management's ability to distribute credit (Permana & Sudirman, 2021). The higher the NIM value, the healthier the bank is (Juanaristo & Astika, 2022).

Table 6. ROA at BUMN Banks for the 2018-2021 Period

| Banks | Year | ROA | Criteria | Rating | Predicate |
|---|---|---|---|---|---|
| BNI | 2018 | 2,80 | ROA > 1,5% | PK 1 | Very healthy |
| | 2019 | 2,40 | ROA > 1,5% | PK 1 | Very Healthy |
| | 2020 | 0,50 | 0% < ROA < 0,5% | PK 4 | Less Healthy |
| | 2021 | 1,40 | 1,25% < ROA < 1,5% | PK 2 | Healthy |
| BTN | 2018 | 1,34 | 1,25% < ROA < 1,5% | PK 2 | Healthy |
| | 2019 | 0,13 | 0% < ROA < 0,5% | PK 4 | Less Healthy |
| | 2020 | 0,69 | 0,5% < ROA < 1,5% | PK 3 | Fairly Healthy |
| | 2021 | 0,81 | 0,5% < ROA < 1,5% | PK 3 | Fairly Healthy |
| Mandiri | 2018 | 3,17 | ROA > 1,5% | PK 1 | Very Healthy |
| | 2019 | 3,03 | ROA > 1,5% | PK 1 | Very Healthy |
| | 2020 | 1,64 | ROA > 1,5% | PK 1 | Very healthy |
| | 2021 | 2,53 | ROA > 1,5% | PK 1 | Very Healthy |
| BRI | 2018 | 3,68 | ROA > 1,5% | PK 1 | Very Healthy |
| | 2019 | 3,50 | ROA > 1,5% | PK 1 | Very Healthy |
| | 2020 | 1,98 | ROA > 1,5% | PK 1 | Very Healthy |
| | 2021 | 2,72 | ROA > 1,5% | PK 1 | Very Healthy |

Source: Data processed (2023)

In Figure 5, it can be seen that bank BRI had a high NIM level before the pandemic of 7.45% in 2018, followed by bank Mandiri, bank BNI, and bank BTN which had a value of 5.52%, 5.30%, and 4.32% respectively. Then for 2019 with the same ranking, BRI bank with a value of 6.98%, Mandiri bank with a value of 5.46%, BNI bank with a value of 4.90%, and BTN bank with a value of 3.32%. Meanwhile, during the pandemic, the NIM value for each bank


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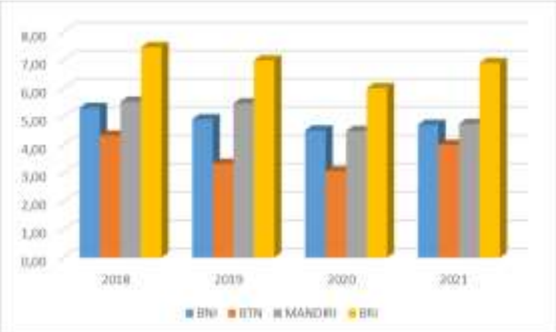
has decreased, for example at BRI bank which in 2019 amounted to 6.98%, in fact in 2020 during the pandemic it decreased to 6.00% in 2019, but rose again in 2021 to 6.89%. Likewise with other banks and the lowest NIM level during the pandemic in 2020 and 2021 is held by BTN bank with a value of 3.06% and 3.99% respectively.




Source: Data processed (2023)

Figure 5. NIM at BUMN Banks for the 2018-2021 Period

In table 7, it is shown that state-owned banks both before and during the pandemic were able to generate excellent net interest income, as evidenced during this period each state-owned bank was able to score a NIM value above 3%, although there was a slight decrease in NIM value but it did not change the composite predicate of earnings assessment. This means that the bank's management has good capabilities in managing their productive assets so that they are able to optimize their net interest income. (Juanaristo & Astika, 2022).

Table 7. NIM at BUMN Banks for the 2018-2021 Period

| Banks | Year | NIM | Criteria | Rating | Predicate |
|---|---|---|---|---|---|
| BNI | 2018 | 5,30 | NIM > 3% | PK 1 | Very healthy |
| | 2019 | 4,90 | NIM > 3% | PK 1 | Very Healthy |
| | 2020 | 4,50 | NIM > 3% | PK 1 | Very Healthy |
| | 2021 | 4,70 | NIM > 3% | PK 1 | Very Healthy |
| BTN | 2018 | 4,32 | NIM > 3% | PK 1 | Very Healthy |
| | 2019 | 3,32 | NIM > 3% | PK 1 | Very Healthy |
| | 2020 | 3,06 | NIM > 3% | PK 1 | Very Healthy |
| | 2021 | 3,99 | NIM > 3% | PK 1 | Very Healthy |
| Mandiri | 2018 | 5,52 | NIM > 3% | PK 1 | Very Healthy |
| | 2019 | 5,46 | NIM > 3% | PK 1 | Very Healthy |
| | 2020 | 4,48 | NIM > 3% | PK 1 | Very Healthy |
| | 2021 | 4,73 | NIM > 3% | PK 1 | Very Healthy |
| BRI | 2018 | 7,45 | NIM > 3% | PK 1 | Very Healthy |
| | 2019 | 6,98 | NIM > 3% | PK 1 | Very Healthy |
| | 2020 | 6,00 | NIM > 3% | PK 1 | Very Healthy |
| | 2021 | 6,89 | NIM > 3% | PK 1 | Very Healthy |

Source: Data processed (2023)

***Capital***

In this study, CAR is used to measure the capital factor in state-owned banks. CAR itself is used to determine whether the bank's capital is sufficient to support the bank's operations, whether capital can bear inevitable losses, and whether the bank's wealth will increase or decrease. (Baihaqi & Yulianti, 2020).

To expand business and reduce the risk of loss, banks must have sufficient capital (Rustendi, 2020). A good CAR value is a CAR value of more than 8%. If the bank's CAR value is higher, the bank is healthier because of its resilience to the decline in asset value due to non-performing assets (Almunawwaroh, 2017).

Figure 6 shows that before the pandemic in 2018 and 2019, the highest CAR value was achieved by BRI bank with a value of 21.21% and 22.55% respectively. Meanwhile, the lowest value before the pandemic in 2018 and 2019 was achieved by BTN bank with a value of 18.21% and 17.32%. During the pandemic in 2020 and 2021, the highest CAR value was achieved again by BRI bank at 20.61% and 25.28% respectively. Meanwhile, the lowest value during the pandemic occurred in 2020 by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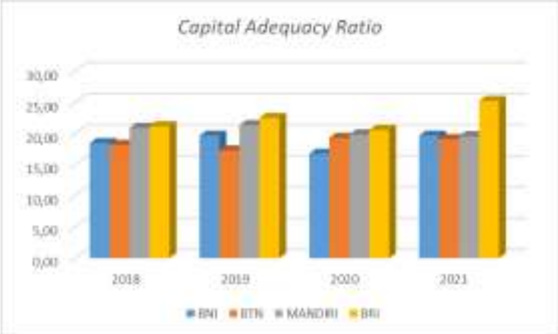
bank BNI with a value of 16.80% and in 2021 by bank BTN with a value of 19.14%.




Source: Data processed (2023)

Figure 6. CAR at BUMN Banks for the 2018-2021 Period

Table 8 shows that both before and after the pandemic, SOE banks were able to maintain their capital adequacy. It can also be seen in table 8 that each state-owned bank is in composite rank 1, which means that the capital adequacy of state-owned banks is very healthy, although at the time of entering the pandemic it decreased slightly but still did not change this predicate. This shows that Bank Negara Indonesia (Persero) Tbk, Bank Rakyat Indonesia (Persero) Tbk, Bank Tabungan Negara (Persero) Tbk, and Bank Mandiri (Persero) Tbk have sufficient capital to withstand losses (Pertiwi, 2022), so that the increase in CAR value can increase the amount of money available as well. It is shows that with large capital able to overcome or cover losses originating from internal and external banks are able to survive the covid-19 pandemic (Ariyani, 2020).

Table 8. CAR at BUMN Banks for the 2018-2021 Period

| Banks | Year | CAR | Criteria | Rating | Predicate |
|---|---|---|---|---|---|
| BNI | 2018 | 18,50 | CAR > 11% | PK 1 | Very healthy |
| | 2019 | 19,70 | CAR > 11% | PK 1 | Very Healthy |
| | 2020 | 16,80 | CAR > 11% | PK 1 | Very Healthy |
| | 2021 | 19,70 | CAR > 11% | PK 1 | Very Healthy |
| BTN | 2018 | 18,21 | CAR > 11% | PK 1 | Very Healthy |
| | 2019 | 17,32 | CAR > 11% | PK 1 | Very Healthy |
| | 2020 | 19,34 | CAR > 11% | PK 1 | Very Healthy |
| | 2021 | 19,14 | CAR > 11% | PK 1 | Very Healthy |
| Mandiri | 2018 | 20,96 | CAR > 11% | PK 1 | Very Healthy |
| | 2019 | 21,39 | CAR > 11% | PK 1 | Very Healthy |
| | 2020 | 19,90 | CAR > 11% | PK 1 | Very Healthy |
| | 2021 | 19,60 | CAR > 11% | PK 1 | Very Healthy |
| BRI | 2018 | 21,21 | CAR > 11% | PK 1 | Very Healthy |
| | 2019 | 22,55 | CAR > 11% | PK 1 | Very Healthy |
| | 2020 | 20,61 | CAR > 11% | PK 1 | Very Healthy |
| | 2021 | 25,28 | CAR > 11% | PK 1 | Very Healthy |

Source: Data processed (2023)

### *Risk Profile, Good Corporate Governance, Earning, and Capital (RGEC) of State-Owned Banks Before and During the Covid-19 Pandemic*

Table 9. Health Assessment of SOE Banks using the RGEC Method for the 2018-2021 Period

| Banks | Year | Rating | Predicate |
|---|---|---|---|
| BNI | 2018 | PK 1 | Very healthy |
| | 2019 | PK 1 | Very Healthy |
| | 2020 | PK 2 | Healthy |
| | 2021 | PK 1 | Very Healthy |
| BTN | 2018 | PK 2 | Healthy |
| | 2019 | PK 2 | Healthy |
| | 2020 | PK 2 | Healthy |
| | 2021 | PK 2 | Healthy |
| Mandiri | 2018 | PK 1 | Very Healthy |
| | 2019 | PK 1 | Very Healthy |
| | 2020 | PK 1 | Very healthy |
| | 2021 | PK 1 | Very Healthy |
| BRI | 2018 | PK 1 | Very Healthy |
| | 2019 | PK 1 | Very Healthy |
| | 2020 | PK 1 | Very Healthy |
| | 2021 | PK 1 | Very Healthy |

Source: Data processed (2023)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Based on table 9, the RGEC method is used to measure the health level of BNI bank from 2018 to 2021. The result is that in 2018 bank BNI has a very healthy predicate based on the composite calculation of each factor until 2019. In 2020, BNI bank fell from very healthy to healthy predicate due to a significant decrease in ROA value due to the covid-19 pandemic which had an impact on the bank's health assessment, but did not have much impact on other factors. Furthermore, in 2021 it returns to the PK 1 rating, which means it is very healthy because BNI bank has been able to adapt to the pandemic situation. Furthermore, the results of the analysis using the RGEC method at BTN bank in 2018 have a PK 2 predicate, which means that BTN bank in carrying out its operations and seen from its performance can be said to be healthy. Likewise, in 2019 before the pandemic and in 2020 and 2021, which have entered the pandemic period, BTN banks are still able to maintain their healthy performance. The RGEC analysis used to measure the health level of bank Mandiri can be seen in table 10 that bank Mandiri was able to maintain its performance and operations during the study period so that it was able to record a very healthy predicate for four consecutive years. Likewise with BRI bank, where BRI bank is also able to maintain the stability of the 4 factors analyzed in this study. Bank Mandiri and Bank BRI are the two banks that showed good health during this period. Although Bank BNI experienced a downgrade in 2020, they managed to recover their health in 2021. Meanwhile, Bank BTN showed consistency in getting the "Healthy" predicate for four consecutive years, although it did not achieve the "Very Healthy" predicate like Bank Mandiri and Bank BRI.

Economic uncertainty during the pandemic requires state-owned banks to maintain asset quality by being prudent in lending and reducing non-performing loans and maintaining revenue stability to support capital adequacy (Rustendi & Ilyas, 2023). Anticipatory steps taken by state-owned banks have been successful in maintaining capital stability during the COVID-19 pandemic so that liquidity risks can be mitigated.

Economic recovery is a momentum for state-owned banks to increase their lending to the real sector. Although state-owned banks have to restructure loans due to the pandemic, state-owned banks have other options, namely by maximizing PEN funds and issuing bonds which can have a positive impact on lending but increase debt (Rustendi & Ilyas, 2023).

Healthy banks are more easily meet obligations to customers and minimize liquidity risk so that they can build public confidence to apply for credit or save money in the form of savings or deposits. In this covid-19 pandemic, healthy banks are able to stimulate the community's economy so that the economy can recover.

All these results show that all state-owned banks have conducted their bank self-assessment in accordance with BI SE 13/2011 and POJK 4/2016 on Bank Health Level Assessment. Regardless of the fluctuations in the value of each factor studied, overall SOE banks are still able to maintain their operational performance and stability both before the pandemic and after entering the covid-19 pandemic situation.

## CONCLUSION

According to the findings of this analysis, the health of state-owned banks before and during the covid-19 pandemic in 2018-2022 is as follows: (1) The risk profile reflected by the LDR indicator shows that BNI bank has a generally healthy predicate in 2018-2020, and a healthy predicate in 2021. Then, for BTN bank, 2018 and 2019 have an unhealthy forecast, but 2020 and 2021 have a healthy forecast. Bank Mandiri and BRI have a fairly healthy predicate in 2018 and 2019, and a healthy predicate in 2020 and 2021; whereas BNI bank's NPL


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indicator has a very healthy predicate in 2018, and a healthy predicate in 2019-2021. Similarly, bank BTN, bank Mandiri, and bank BRI have a healthy predicate in the 2018-2021 period; (2) sound corporate governance of bank BNI, bank BTN, and bank BRI has a healthy predicate in the 2018-2021 period. Meanwhile, bank Mandiri had a very healthy predicate during the same period; (3) earnings represented by the ROA indicator that bank BNI had a very healthy predicate in the 2018 and 2019 periods, but due to the impact of the pandemic in 2020, it decreased to less healthy and increased again to healthy in 2021. Meanwhile, BTN bank had a healthy predicate in 2018, a less healthy predicate in 2019, and a healthy predicate again in 2020 and 2021. Bank Mandiri and bank BRI remained stable with a very healthy predicate during the research period; while the NIM indicator of bank BNI, bank BTN, bank Mandiri, and bank BRI successively had a very healthy predicate in the 2018-2021 period; (4) capital represented by the CAR indicator that bank BNI, bank BTN, bank Mandiri, and bank BRI successively had a very healthy predicate in the 2018-2021 period; and (5) overall, BTN bank has a healthy predicate for the 2018-2021 period, while Mandiri bank and BRI bank have a very healthy predicate for the 2018-2021 period.

Future research might include more samples and not just samples from state-owned banks, as well as different tests to ensure that the results gained are meaningful and complete, thereby increasing information about assessing the health of banks. Increase the study time and introduce new variables to make the RGEC approach more full and accurate in measuring bank health.

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