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## ***Pre- And Post-Pandemic Financial Performance: Comparative Analysis Of Profitability, Liquidity, And Solvency Ratios In The Idx Lq45 Banking Sector (2019-2023)***

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### **ABSTRACT**

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*This study analyzes the financial performance of five banking companies in the IDX LQ45 index during 2019–2023, focusing on profitability, liquidity, and solvency before and after the COVID-19 pandemic. A descriptive quantitative approach is employed using secondary data from annual financial statements. The analysis utilizes financial ratios, including Return on Assets (ROA), Return on Equity (ROE), and Net Profit Margin (NPM) for profitability; Current Ratio (CR) and Quick Ratio (QR) for liquidity; and Debt to Equity Ratio (DER) and Debt to Assets Ratio (DAR) for solvency. The data is analyzed using the Paired Sample T-Test in SPSS version 29. The findings indicate a significant decline in profitability during the pandemic, followed by a recovery trend in 2023. Liquidity and solvency remained stable due to government interventions and effective risk management. These results provide insights for regulators and investors regarding the banking sector's resilience against economic shocks and the effectiveness of risk mitigation strategies.*

## **INTRODUCTION**

The COVID-19 pandemic, which emerged at the end of 2019, disrupted the global economy and significantly affected the banking sector. Studies show that the pandemic led to a decline in profitability and financial performance in banks worldwide, including in Indonesia (Shah et al., 2023; Demirgüç-Kunt et al., 2020; Elnahass et al., 2021). In Indonesia, large banks listed on the IDX LQ45 index also experienced financial pressure due to reduced economic activity and increased credit risk (Pambudianna & Sari, 2022; Sohibien et al., 2022; Laurensius & Rahmiyati, 2023).

While several studies have examined the short-term impact of the pandemic on bank performance, limited research has focused on a comparative analysis of financial ratios before and after the pandemic among major banks in the IDX LQ45. Most previous studies have not fully captured the long-term implications of the pandemic or the different strategic responses of each bank (Darjana et al., 2022; R. & Zaputra, 2022; Susanti et al., 2023).

This study aims to analyze and compare the financial performance—specifically profitability, liquidity, and solvency—of the five largest banks listed in the IDX LQ45 (BCA, BRI, Mandiri, BNI, and BTN) during the pre-pandemic (2019) and post-pandemic (2023) periods. The objective is to provide insights for regulators, investors, and other stakeholders to better understand how the pandemic affected financial performance and how such events might shape future policies and investment decisions.

## LITERATURE REVIEW

Previous studies are used to support the current research conducted by the author. These prior studies, drawn from research journals related to the author's topic, serve as references in shaping the current investigation.

The first study is from a journal by Hakim, L. (2024), which found that the financial performance of several Indonesian banks from 2016 to 2022 revealed significant concerns regarding their liquidity, solvency, and profitability ratios. Key findings indicate that most banks, including PT Bank Central Asia Tbk and PT Bank Mandiri Tbk, were operating below industry standards in terms of current ratios, debt-to-total assets, and profitability metrics such as net profit margin and return on assets. The study emphasized the importance of monitoring financial health, particularly during economic disruptions like the COVID-19 pandemic, and identified PT Bank Central Asia Tbk as the best performer among the analyzed banks.

The second study, by Ali, A. (2023), demonstrated a significant decline in total revenue, total expenditure, and profitability for Indian oil and gas companies during the COVID-19 pandemic. It was found that smaller production companies experienced a smaller absolute decline in financial metrics compared to larger production firms. Large companies were more severely affected due to higher fixed costs. Despite the

negative impact on financial performance from 2019 to 2020, the situation improved in 2021 and beyond. The liquidity status of these companies remained relatively unchanged during the pandemic, but large companies had better solvency, leading to an increase in post-pandemic solvency ratios to improve profitability.

A third study conducted by Elnahass (2021) revealed that the COVID-19 pandemic had a significantly negative impact on the financial performance and stability of banks globally. The pandemic led to a decline in bank performance in terms of profitability, cost efficiency, market valuation, and increased risks such as default and liquidity risk. However, there were early signs of recovery in bank stability by the second quarter of 2020, as restrictions eased and economic activities picked up in some countries. These findings have important implications for policymakers and market participants in managing risks and enhancing global banking stability in the future.

The fourth study, by Demirguc-Kunt (2013), found that various financial sector policy measures announced during the early stages of the COVID-19 crisis had varying impacts on bank stock prices worldwide. Liquidity support measures, borrower assistance programs, and monetary easing helped mitigate the negative effects of the crisis, but their effects varied across banks and countries. Conversely, countercyclical prudential measures tended to have a negative impact on abnormal bank stock returns, indicating that markets factored in the downside risks associated with such policies.

## **Banking**

Banks are financial institutions that act as intermediaries between parties with surplus funds (savers or investors) and those in need of funds (debtors or borrowers). Banks collect funds from the public and channel them to those requiring financing for various purposes, including investment. Additionally, banks play a vital role in facilitating the flow of payments, ensuring efficiency and smooth financial transactions within the economy (Carnell, R., et al., 2016).

## **Financial Ratios**

Financial ratios are important analytical tools used to measure a company's or bank's financial performance. Another opinion states that financial ratio analysis

involves breaking down ratios, which is essentially done by compiling and combining figures from financial statements such as income statements and balance sheets (Halim, 2016:74). Financial ratio analysis is forward-looking, meaning it can be used as a tool to predict future financial conditions and business outcomes (Munawir, 2010). The many financial ratio kinds are as follows: (Kasmir, 2016)

1. Liquidity Ratios:
  - a. Current Ratio
  - b. The Quick Ratio
  - c. Cash Ratio
2. Ratios of Solvency:
  - a. The ratio of debt to equity (DER)
  - b. The DAR, or debt to assets ratio
3. Ratios of profitability
  - a. NPM, or net profit margin
  - b. ROE, or return on equity
  - c. ROI, or return on investment

In conclusion, financial ratios are analytical tools used to assess a company's financial performance by comparing various elements of its financial statements, such as balance sheets, income statements, and cash flow statements. These ratios help management, investors, creditors, and other stakeholders understand the company's financial condition, operational efficiency, and its ability to meet both short-term and long-term financial obligations.

### **Liquidity Ratios**

Liquidity ratio analysis assesses a bank's ability to meet its short-term obligations or those that are due. A bank is considered liquid if it can meet its debt obligations, repay all its deposits, and fulfill credit requests without delay. Some commonly used liquidity ratios to evaluate a bank's performance include the cash ratio, reserve requirement, loan-to-deposit ratio, loan-to-asset ratio, and net obligation ratio (Kasmir, 2008:221).

## Solvency Ratios

Solvency ratio analysis measures a bank's ability to meet its long-term obligations or its ability to satisfy liabilities in the event of liquidation. Some ratios used include the Capital Adequacy Ratio (CAR), Debt to Equity Ratio, and Long-Term to Asset Ratio.

## Profitability Ratios

Profitability ratios are used to measure a bank's ability to maximize profits using available economic resources. Some of the profitability ratios include net profit margin, return on assets, return on equity, and return on total assets (Kasmir, 2008:235).

## METHODS

This study uses a descriptive quantitative approach to analyze the financial performance comparison of the banking sector in IDX LQ45 before and after the COVID-19 pandemic (2019-2023). The type of research conducted is comparative research. Comparative research is characterized by comparing two or more variables or objects. The data used are secondary data sourced from the annual financial reports published by banking companies listed on the Indonesia Stock Exchange (IDX).

The data collected consists of annual financial reports for the period of 2019-2023, which can be accessed through the official website of the Indonesia Stock Exchange and the respective annual reports of each banking company. This data includes the financial ratio components that serve as the main variables of the study, namely profitability, liquidity, and solvency.

Profitability is measured using the ratios of Return on Assets (ROA), Return on Equity (ROE), and Net Profit Margin (NPM). Liquidity is measured using the Current Ratio (CR) and Quick Ratio (QR). Meanwhile, solvency is measured using the Debt to Equity Ratio (DER) and Debt to Assets Ratio (DAR).

A descriptive quantitative analysis is conducted to observe trends and patterns in financial ratio changes before and after the pandemic. This method includes comparing the mean (Pre-Post Pandemic) using statistical tests to compare the average

financial ratios in two periods (pre-pandemic: 2019 and 2020, and post-pandemic: 2021 to 2023).

The collected data will be analyzed using SPSS version 29 statistical software with Paired Sample T-Test analysis. The Paired Sample T-Test compares the average financial ratios before and after the pandemic; the analyzed data are paired data, where the financial ratios are measured before and after the pandemic. The Paired Sample T-Test is a parametric statistic, meaning the assumption of data normality must be fulfilled, or the data must be normally distributed. Therefore, the Kolmogorov-Smirnov normality test will be conducted to examine whether the data are normally distributed or not before performing the Paired Sample T-Test.

The results of the financial ratio and statistical analysis will be presented in tables or graphs to illustrate the identified changes and trends. These results will be comprehensively analyzed to explain the impact of the COVID-19 pandemic on the performance of the banking sector in Indonesia.

This study is limited to the five largest banking sector companies in IDX LQ45, and the study period is from 2019 to 2023. Other factors beyond the financial ratios that may affect the results, such as monetary and fiscal policies, are not analyzed in depth.

## RESULTS

### Comparative Analysis of the Financial Ratios of Each Bank Under Study

The comparison of financial ratios for each bank will be based on the average value for each type of ratio against established standards. The results of this ratio comparison are as follows:

**Table 1. Result of Calculating The Financial Ratios of Banks Registered in LQ45**

Ratio	Year	BCA	BNI	BRI	BTN	MANDIRI
<b>Profitability</b>						
<b>ROA</b>	2023	1,78%	1,19%	1,64%	0,37%	1,41%
	2022	3,11%	1,79%	2,76%	0,76%	2,26%
	2021	2,56%	1,14%	1,83%	0,64%	1,77%

	2020	2,52%	0,37%	1,23%	0,44%	1,23%
	2019	3,11%	1,83%	2,43%	0,07%	2,16%
<b>ROE</b>	2023	10,77%	7,25%	9,90%	5,19%	10,85%
	2022	18,43%	13,18%	16,94%	11,75%	17,82%
	2021	15,50%	8,68%	10,54%	11,10%	13,75%
	2020	14,70%	2,94%	9,33%	8,02%	9,11%
	2019	16,41%	12,41%	16,48%	0,88%	13,61%
<b>NPM</b>	2023	56,83%	34,33%	34,54%	12,50%	43,16%
	2022	56,42%	33,81%	33,85%	13,11%	40,00%
	2021	47,91%	21,94%	21,43%	10,15%	31,25%
	2020	41,51%	5,91%	15,96%	6,98%	20,21%
	2019	44,75%	28,46%	28,26%	0,90%	31,09%
<b>Liquidity</b>						
<b>CR</b>	2023	13,95%	17,07%	12,17%	9,62%	12,71%
	2022	14,76%	18,42%	17,17%	11,82%	17,80%
	2021	17,38%	20,68%	11,10%	12,58%	14,60%
	2020	12,00%	17,01%	13,08%	10,78%	15,41%
	2019	15,28%	11,79%	20,02%	11,60%	12,07%
<b>QR</b>	2023	14,97%	20,71%	32,70%	10,70%	17,14%
	2022	14,95%	21,63%	38,31%	12,31%	23,16%
	2021	17,49%	23,76%	37,92%	13,26%	21,99%
	2020	12,21%	20,98%	38,68%	11,77%	22,35%
	2019	15,82%	15,74%	36,58%	14,60%	19,02%
<b>Solvency</b>						
<b>DAR</b>	2023	0,83%	0,86%	0,83%	0,87%	0,77%
	2022	0,83%	0,86%	0,84%	0,87%	0,77%
	2021	0,83%	0,87%	0,83%	0,88%	0,77%
	2020	0,82%	0,84%	0,85%	0,89%	0,81%
	2019	0,81%	0,81%	0,84%	0,86%	0,78%
<b>DER</b>	2023	5,01%	6,14%	5,05%	12,27%	5,94%
	2022	4,92%	6,35%	5,15%	13,56%	6,12%

2021	5,03%	6,63%	4,75%	15,31%	5,97%
2020	4,79%	6,61%	6,39%	16,08%	5,94%
2019	4,25%	5,51%	5,67%	11,30%	4,91%

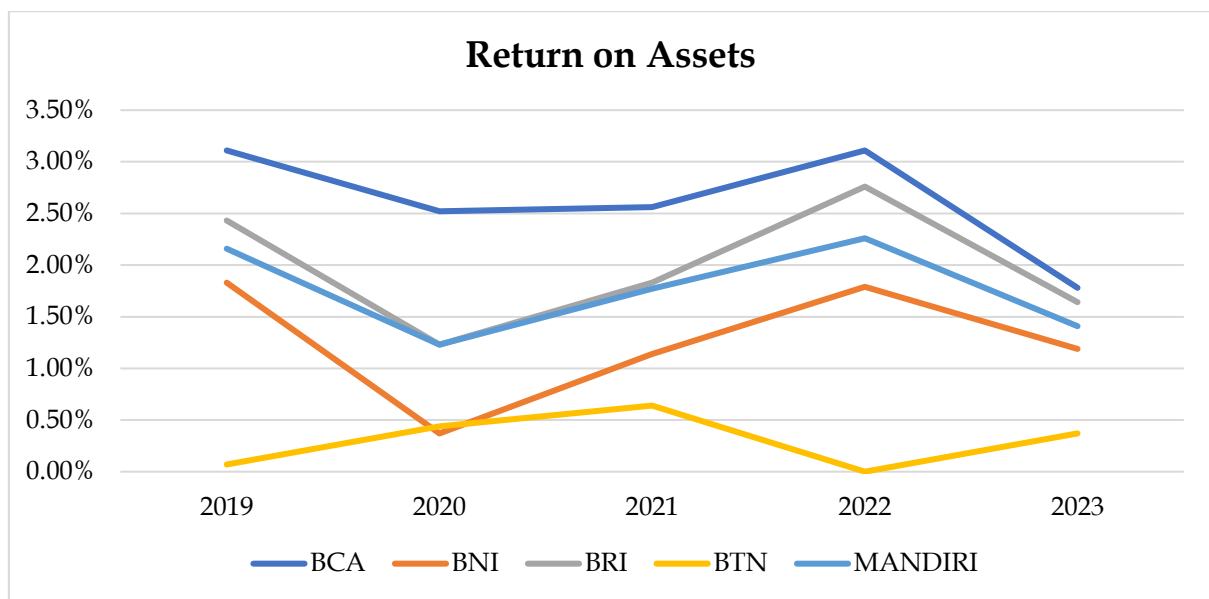
Source: data processed, 2024

### Financial Performance of Banks Based on Financial Ratio Analysis

The financial performance of banks, as indicated by financial ratios before (2019-2020) and after the pandemic (2021-2023), provides a more detailed picture of how the COVID-19 pandemic affected the profitability, liquidity, and solvency of major banks in Indonesia (BCA, BNI, BRI, BTN, Mandiri).

#### Profitability

##### ROA (Return on Assets)



ROA reflects the efficiency of banks in managing assets to generate profit. In the pre-pandemic period, particularly in 2019, ROA remained relatively stable, indicating that these banks were able to optimize their assets to generate high returns. For example, BCA achieved 3.11% in 2019, the highest among the banks, demonstrating superior asset management efficiency.

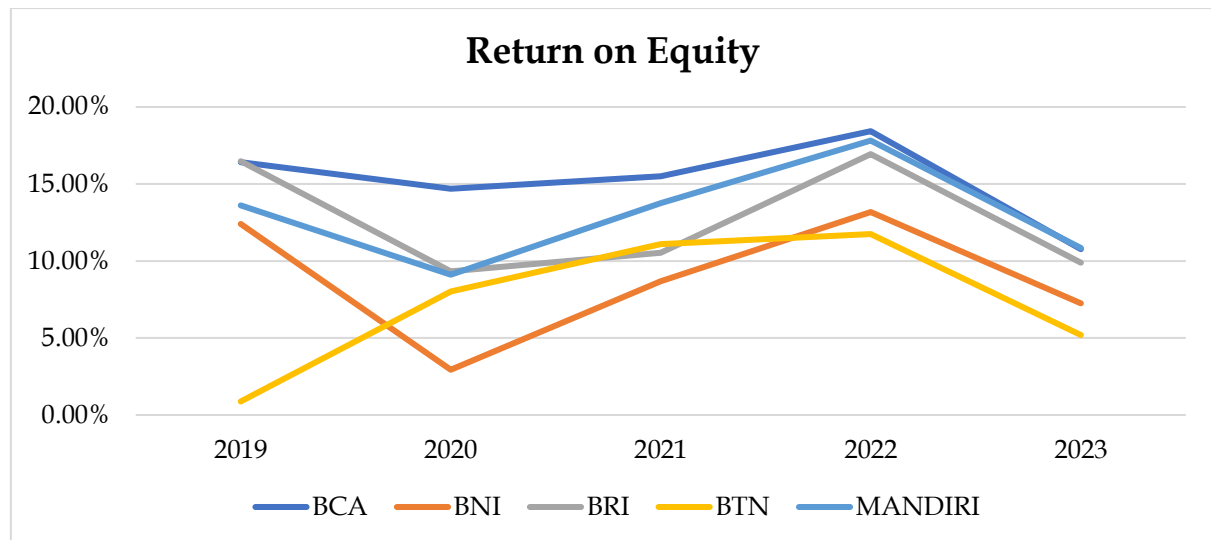
Post-pandemic, especially in 2023, a significant decline in ROA was observed in almost all banks. BTN experienced a drastic drop from 0.90% in 2019 to 0.37% in 2023. This suggests that the banks' ability to generate profits from the assets they manage declined due to the pandemic. Contributing factors include reduced lending due to



decreased demand, an increase in non-performing loans, and credit restructuring, which lowered bank revenues.

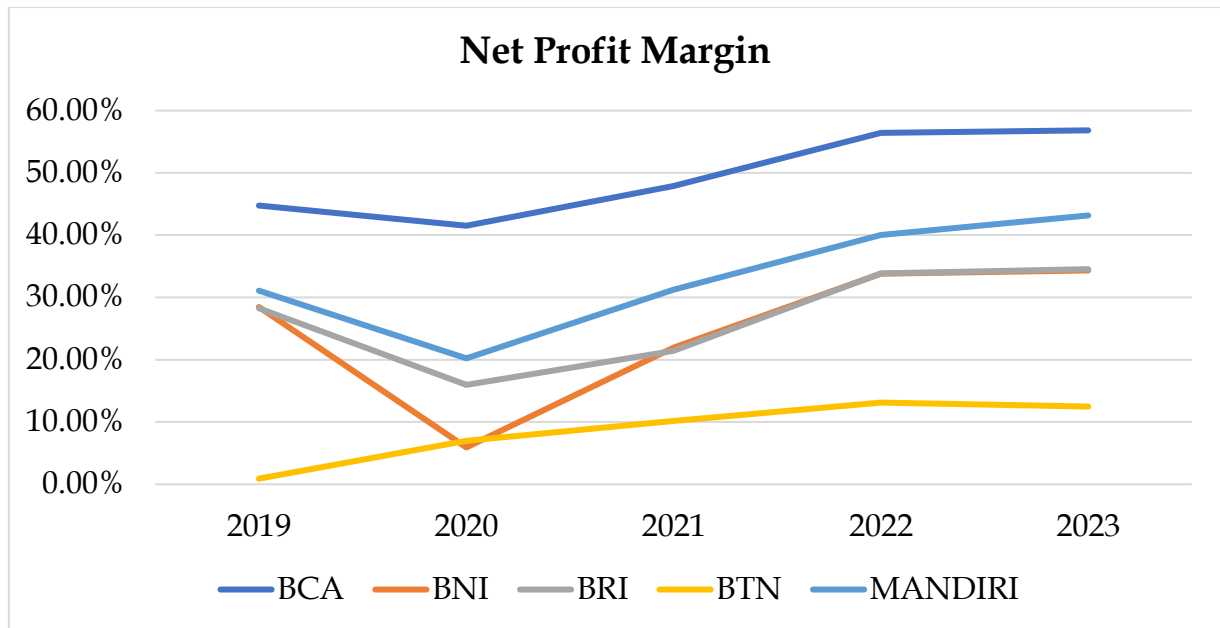
### ROE (Return on Equity)

ROE indicates how effectively equity capital is used to generate profit. Before the pandemic, BCA and Mandiri had relatively high ROE, with BCA reaching 18.43% and Mandiri 21.16% in 2019, signaling efficient equity management.



### NPM (Net Profit Margin)

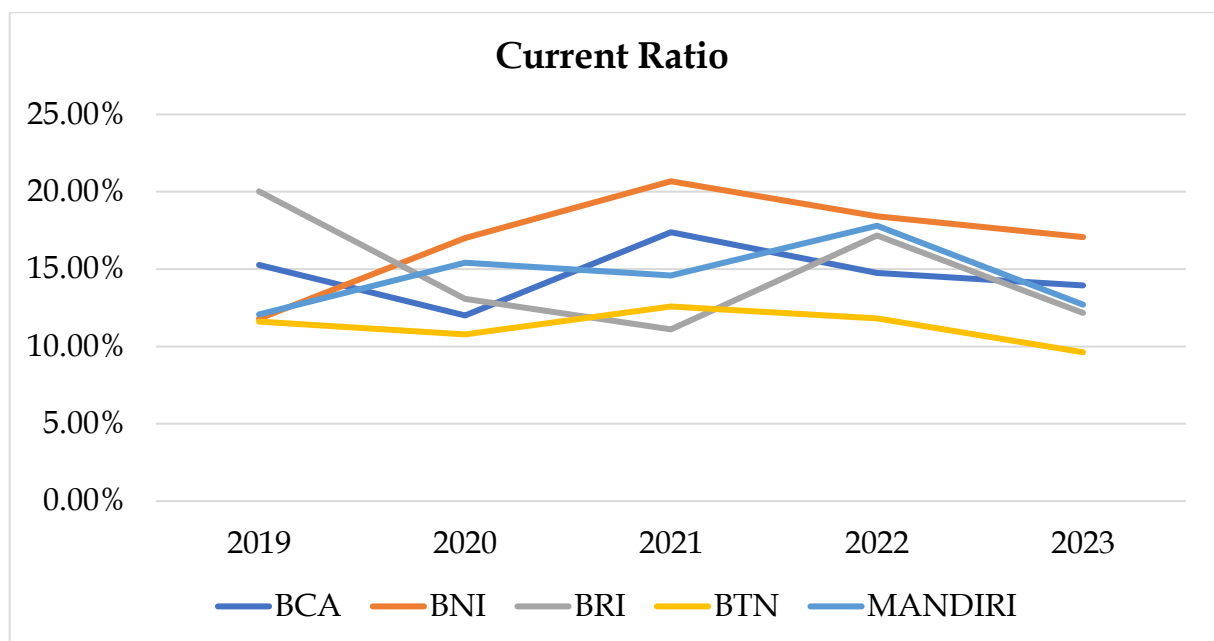
NPM measures how much net profit can be generated from the bank's operating revenue. Before the pandemic, especially in 2019, NPM was relatively high. BCA and Mandiri recorded very high margins (44.75% and 31.09%, respectively), indicating that these banks had successfully maximized profitability.



However, post-pandemic, especially in 2023, NPM declined sharply, particularly for BTN and Mandiri. BTN, which already had a low NPM in 2020 (6.98%), continued to decline to 0.88% in 2023. This suggests that the pandemic significantly affected the banks' ability to maintain net profitability from their operating revenue. Increased costs, including higher provisions for non-performing loans, lower interest income, and heightened competition in the banking sector, may be key contributing factors.

## Liquidity

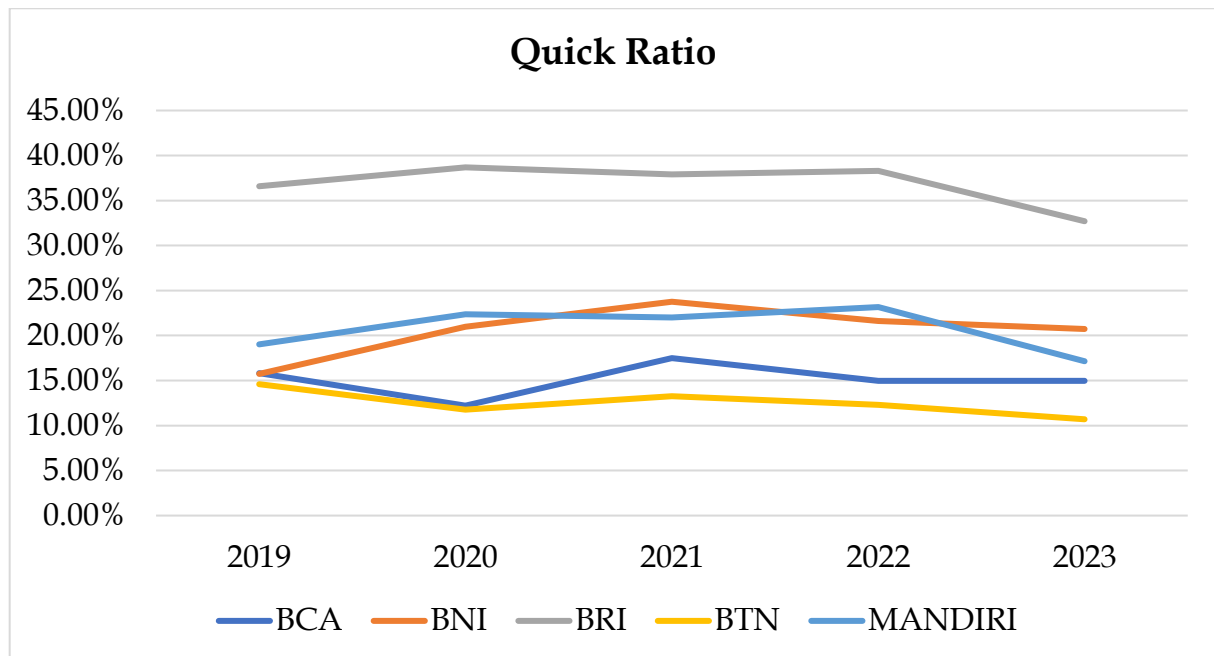
### CR (Current Ratio)



The current ratio (CR) reflects a bank's ability to meet its short-term obligations. In the pre-pandemic period, CR was stable across all banks, indicating that they had sufficient liquid assets to meet their current liabilities.

Post-pandemic, despite the decline in profitability, CR remained stable in most banks. This indicates that the banks' liquidity was not significantly affected by the pandemic. The ability to maintain CR may be supported by government monetary policies, such as lowering interest rates and liquidity programs provided by Bank Indonesia, ensuring banks had sufficient access to liquid funds.

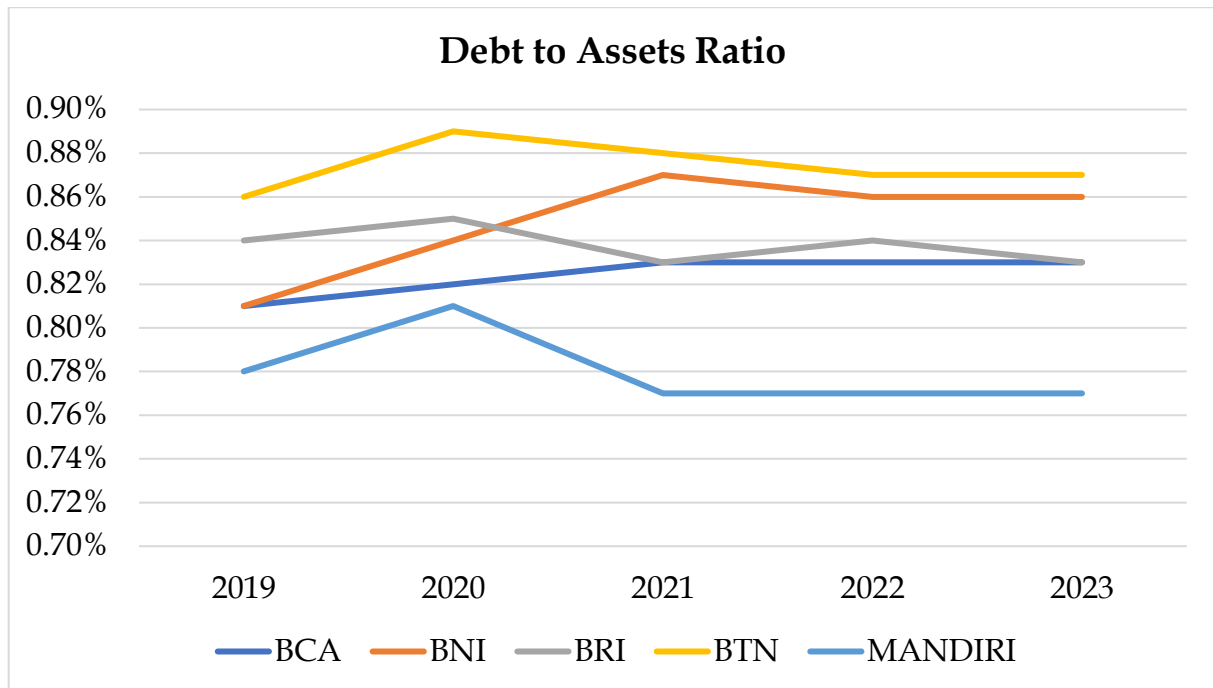
### QR (Quick Ratio)



QR measures a bank's ability to meet short-term obligations without selling inventory. Pre-pandemic, QR reflected strong liquidity, with ratios above 15% for most banks.

Post-pandemic, QR remained high and even increased in some banks. For example, BCA and Mandiri successfully maintained and improved their QR. This shows that despite declining profitability, these banks still had enough liquid assets (cash and cash equivalents) to meet short-term obligations without needing to sell assets under pressure.

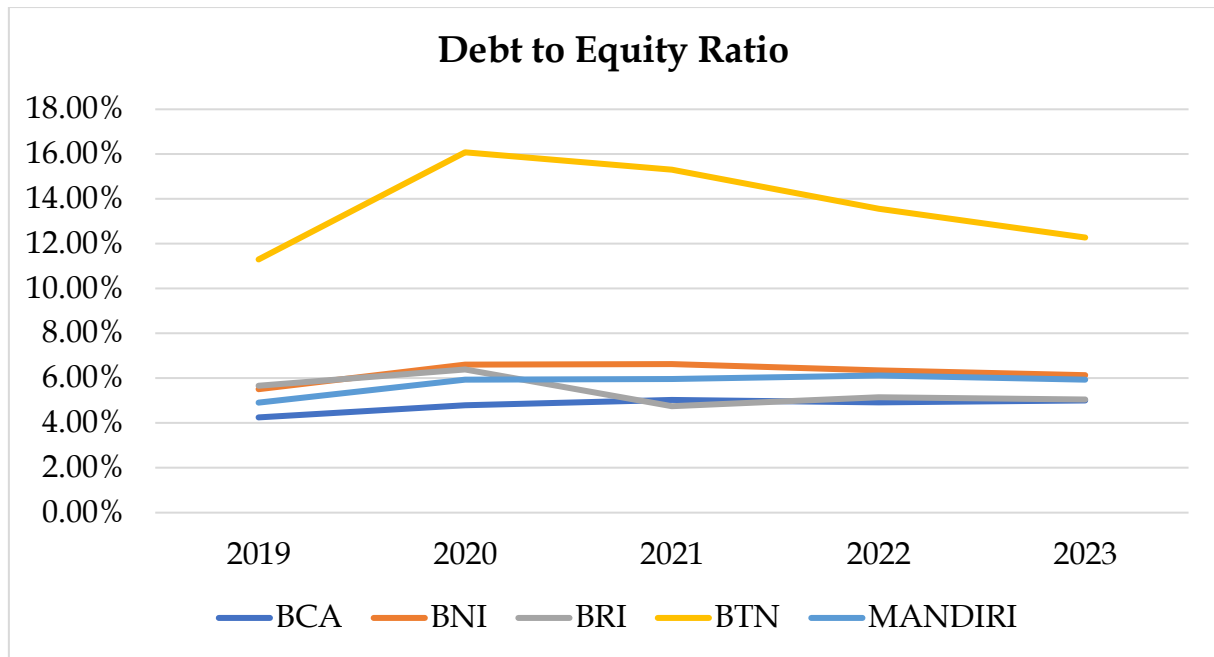
### Solvency

**DAR (Debt to Assets Ratio)**

DAR measures the proportion of assets funded by debt. In the pre-pandemic period, DAR was relatively stable at below 1% for most banks, indicating a strong capital structure with a relatively low proportion of debt compared to their assets.

Post-pandemic, DAR did not experience significant changes, indicating that major banks in Indonesia were able to maintain their capital stability despite the economic pressures caused by the pandemic. This suggests that even with declining profitability, these banks did not rely on increased debt to sustain their operations.

**DER (Debt to Equity Ratio)**



DER measures the extent to which equity is used to fund debt. In the pre-pandemic period, DER was stable and controlled, with ratios below 7% for most banks.

Post-pandemic, DER also did not undergo significant changes, showing that these banks did not need to significantly increase equity to support their debt. This demonstrates the stability of bank capital, where they did not have to rely on additional equity to cover potential losses or increased debt during the pandemic.

The COVID-19 pandemic had a significant impact on the profitability of major banks in Indonesia, particularly in terms of their ability to generate profits from the assets and equity they held. Profitability ratios such as ROA, ROE, and NPM experienced a sharp decline, reflecting pressure on revenues from both declining interest income and rising operational costs. However, on the other hand, liquidity ratios (CR and QR) and solvency ratios (DAR and DER) demonstrated strong stability, indicating that these banks were able to maintain liquidity and solvency during the pandemic. This stability may be due to government and Bank Indonesia policy interventions, as well as effective risk management in the banking sector, enabling them to remain liquid and solvent despite global economic challenges.

**Paired Sample T-Test Analysis****Profitability****Return on Assets (ROA)****Paired Samples Statistics**

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRE	1.5380	5	.93932	.42008
	POST	1.6500	5	.75455	.33745

**Paired Samples Correlations**

		N	Correlation	Significance	
				One-Sided p	Two-Sided p
Pair 1	PRE & POST	5	.980	.002	.003

**Paired Samples Test****Paired Differences**

		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference	
					Lower	Upper
Pair 1	PRE - POST	-.11200	.24984	.11173	-.42222	.19822

**Paired Samples Test**

				Significance	
		t	df	One-Sided p	Two-Sided p
Pair 1	PRE - POST	-1.002	4	.186	.373

**Paired Samples Effect Sizes**

			Standardize $r^a$	Point Estimate	95% Confidence Interval	
					Lower	Upper
Pair 1	PRE - POST	Cohen's d	.24984	-.448	-1.351	.502
		Hedges' correction	.31313	-.358	-1.078	.400

The mean value of Return on Assets (ROA) during the pre-pandemic period was 1.5380, while it increased to 1.6500 in the post-pandemic period. Overall, there was an improvement in the average ROA after the pandemic compared to before the pandemic. This indicates that despite the challenges faced by the banking industry during the pandemic, profitability per asset, as measured by ROA, improved in the post-pandemic period.

Based on the results of the Paired t-test, the difference in mean ROA between the pre-pandemic and post-pandemic periods has a significance value (p-value) of 0.002, meaning that this difference is significant at the 95% confidence level. Therefore, it can be concluded that there is a significant difference in ROA between the pre-pandemic and post-pandemic periods.

The interpretation of this test result suggests that the change in economic conditions due to the pandemic significantly affected the profitability of banks, as measured by ROA.

**Return on Equity (ROE)****Paired Samples Statistics**

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRE	10.3920	5	4.37744	1.95765
	POST	12.1100	5	2.52256	1.12812

**Paired Samples Correlations**

		N	Correlation	Significance	
				One-Sided p	Two-Sided p
Pair 1	PRE & POST	5	.910	.016	.032

**Paired Samples Test**

## Paired Differences

		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference	
					Lower	Upper
Pair 1	PRE - POST	-1.71800	2.32912	1.04162	-4.60999	1.17399

**Paired Samples Test**

		t	df	Significance	
				One-Sided p	Two-Sided p
Pair 1	PRE - POST	-1.649	4	.087	.174

**Paired Samples Effect Sizes**

					95% Confidence Interval		
				Standardized <sup>a</sup>	Point Estimate		
						Lower	Upper
Pair 1	PRE - POST	Cohen's d	2.32912	-.738	-1.711	.301	
		Hedges' correction	2.91912	-.589	-1.365	.240	

The mean value of Return on Equity (ROE) during the pre-pandemic period was 10.392, while it increased to 12.110 in the post-pandemic period. Overall, there



was an improvement in the average ROE after the pandemic compared to before the pandemic. This indicates that the variation in pre-pandemic ROE was greater than after the pandemic.

The increase in the average ROE shows that companies generally experienced an increase in profitability or efficiency after the pandemic. However, with the decrease in standard deviation, there was greater consistency or stability in company performance after the pandemic, despite the increase in average profitability.

### Net Profit Margin (NPM)

#### Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRE	22.4040	5	14.21527	6.35726
	POST	32.7500	5	15.14906	6.77487

#### Paired Samples Correlations

		N	Correlation	Significance	
				One-Sided p	Two-Sided p
Pair 1	PRE & POST	5	.989	<.,001	.001

#### Paired Samples Test

##### Paired Differences

		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference	
					Lower	Upper
Pair 1	PRE - POST	-10.34600	2.38770	1.06781	-13.31073	-7.38127

**Paired Samples Test**

			Significance		
				One-Sided p	Two-Sided p
		t	df		
Pair 1	PRE - POST	-9.689	4	<,001	<,001

**Paired Samples Effect Sizes**

			Standardized <sup>a</sup>	Point Estimate	95% Confidence Interval	
					Lower	Upper
Pair 1	PRE - POST	Cohen's d	2.38770	-4.333	-7.343	-1.346
		Hedges' correction	2.99254	-3.457	-5.859	-1.074

The mean value of Net Profit Margin (NPM) during the pre-pandemic period was 22.4040, while it increased to 32.7500 in the post-pandemic period. Overall, there was an increase in the average NPM after the pandemic compared to before the pandemic. This suggests that pre-pandemic NPM was larger than post-pandemic.

The significance value (Sig. 2-tailed) is 0.000, which is less than 0.05. This indicates that there is no statistically significant difference between pre-pandemic and post-pandemic NPM. Cohen's d is 2, indicating a large effect size, meaning that the difference between these two periods has a large practical impact. The interpretation is that changes in conditions between the pre-pandemic and post-pandemic periods significantly affected the NPM of companies, with a substantial increase.

**Liquidity****Current Ratio (CR)**

**Paired Samples Statistics**

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRE	13.9040	5	1.91766	.85760
	POST	14.7880	5	2.71343	1.21348

**Paired Samples Correlations**

			Significance		
			Correlation	One-Sided p	Two-Sided p
		N			
Pair 1	PRE & POST	5	.368	.271	.543

**Paired Samples Test**

## Paired Differences

		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference	
					Lower	Upper
Pair 1	PRE - POST	-.88400	2.68565	1.20106	-4.21868	2.45068

**Paired Samples Test**

		t	df	Significance	
				One-Sided p	Two-Sided p
Pair 1	PRE - POST	-.736	4	.251	.503

**Paired Samples Effect Sizes**

			Standardize $r^a$	Point Estimate	95% Confidence Interval	
					Lower	Upper
Pair 1	PRE - POST	Cohen's d	2.68565	-.329	-1.214	.593
		Hedges' correction	3.36597	-.263	-.969	.473

The analysis results show that the average value of the Current Ratio (CR) increased from 13.9040 in the pre-pandemic period to 14.7880 in the post-pandemic period, reflecting a strengthening of company liquidity after the pandemic.

Based on the results of the Paired T-Test, the obtained significance value is 0.538, which is greater than 0.05. According to the testing criteria, if the significance value is greater than 0.05, the conclusion is that there is no statistically significant difference between pre-pandemic and post-pandemic CR. This means that although there is an increase in the average CR from 13.9040 to 14.7880, this difference is statistically insignificant and cannot be considered a real change. Therefore, it cannot be concluded that the pandemic had a significant impact on the company's CR based on this data.

**Quick Ratio (QR)****Paired Samples Statistics**

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRE	20.7740	5	9.91501	4.43413
	POST	21.4000	5	9.23496	4.13000

**Paired Samples Correlations**

			Significance		
N			Correlation	One-Sided p	Two-Sided p
Pair 1	PRE & POST	5	.978	.002	.004

**Paired Samples Test**

## Paired Differences

		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference	
					Lower	Upper
Pair 1	PRE - POST	-.62600	2.10203	.94006	-3.23601	1.98401

**Paired Samples Test**

		t	df	Significance	
				One-Sided p	Two-Sided p
Pair 1	PRE - POST	-.666	4	.271	.542

**Paired Samples Effect Sizes**

					95% Confidence Interval		
				Standardizer a	Point Estimate		
						Lower	Upper
Pair 1	PRE - POST	Cohen's d	2.10203	-0.298	-1.180	.618	
		Hedges' correction	2.63450	-0.238	-0.941	.493	

The analysis of the Quick Ratio (QR) shows a slight increase in the average QR from the pre-pandemic period (20.7740) to the post-pandemic period (21.4000).

However, this difference is not statistically significant, as indicated by the Kolmogorov-Smirnov test results ( $p > 0.05$ ), which suggest that the data distribution for both periods is normal and does not show a significant difference. The similar standard deviations in both periods (pre-pandemic 9.91501 and post-pandemic 9.23496) also reflect a similar level of variability in QR.

Overall, there were no significant changes in the company's QR between the pre-pandemic and post-pandemic periods, indicating the stability of the company's liquidity in coping with the pandemic's impact. This may indicate that the analyzed companies were able to maintain their liquidity capabilities during this period.

### Solvency

#### Debt to Assets Ratio (DAR)

##### Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRE	.8360	5	.03050	.01364
	POST	.8320	5	.03899	.01744

##### Paired Samples Correlations

		N	Correlation	Significance	
				One-Sided p	Two-Sided p
Pair 1	PRE & POST	5	.786	.057	.115

##### Paired Samples Test

##### Paired Differences

		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference	
					Lower	Upper
Pair 1	PRE - POST	.00400	.02408	.01077	-.02590	.03390

**Paired Samples Test**

		t	df	Significance	
				One-Sided p	Two-Sided p
Pair 1	PRE - POST	.371	4	.365	.729

**Paired Samples Effect Sizes**

					95% Confidence Interval		
				Standardize r <sup>a</sup>	Point Estimate		
						Lower	Upper
Pair 1	PRE - POST	Cohen's d	.02408	.166	-.727	1.040	
		Hedges' correction	.03018	.133	-.580	.830	

The statistical analysis results show that the average Debt to Assets Ratio (DAR) before the pandemic ("PRE") was 0.8360 with a standard deviation of 0.03050. After the pandemic ("POST"), the average DAR slightly decreased to 0.8320 with a standard deviation of 0.03899. Although there was a slight decrease in the average value, the larger standard deviation in the post-pandemic period indicates higher variability in debt usage relative to assets during that time.

In general, this change can be interpreted as a sign that companies tended to be more cautious in using debt after the pandemic, although some companies showed higher variability in their financing structures. However, the small difference in the average DAR may also indicate that the pandemic's impact on corporate financial leverage was not significant in aggregate.

**Debt to Equity Ratio (DER)****Paired Samples Statistics**

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRE	7.1460	5	3.71111	1.65966

POST	7.2120	5	3.68432	1.64768
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**Paired Samples Correlations**

			Significance		
N			Correlation	One-Sided p	Two-Sided p
Pair 1	PRE & POST	5	.984	.001	.002

**Paired Samples Test**

## Paired Differences

		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference	
					Lower	Upper
Pair 1	PRE - POST	-.06600	.65851	.29449	-.88364	.75164

**Paired Samples Test**

		t	df	Significance	
				One-Sided p	Two-Sided p
Pair 1	PRE - POST	-.224	4	.417	.834

**Paired Samples Effect Sizes**

				Point Estimate	95% Confidence Interval	
					Lower	Upper
Pair 1	PRE - POST	Cohen's d	.65851	-.100	-.973	.785
		Hedges' correction	.82531	-.080	-.777	.626

Based on the existing statistical analysis, the average Debt to Equity Ratio (DER) in the pre-pandemic period was 7.1460 with a standard deviation of 3.71111, while the average post-pandemic value was 7.2120 with a standard deviation of 3.68432. This



shows that there was no significant change in DER before and after the pandemic, with a very small change in the average value.

In interpretation, the relatively stable DER values between the pre-pandemic and post-pandemic periods may indicate that the companies in the sample were able to maintain their capital structure despite facing financial challenges due to the pandemic. This may be due to cautious management strategies in handling debt and equity during the period of uncertainty.

### **Comparative Financial Performance Analysis Pre and Post Pandemic: Profitability, Liquidity, and Solvency in the IDX LQ45 Banking Sector**

The changes in profitability ratios (ROA, ROE, NPM) indicate an improvement in the profitability of banking companies after the pandemic, while liquidity (CR, QR) and solvency (DAR, DER) did not experience significant changes. Overall, the banking sector in IDX LQ45 showed resilience to the pandemic's impact, with significant profitability improvements without drastically affecting liquidity and solvency.

## **CONCLUSION AND SUGGESTION**

### **Conclusions**

#### **Profitability Ratios (ROA, ROE, NPM)**

ROA: In the post-pandemic period, there was a significant decline in profitability for most banks. However, the statistical analysis revealed an overall increase in the average ROA after the pandemic, with T-test results indicating a significant difference between the pre- and post-pandemic periods.

ROE: There was a decline in equity performance in generating profits during the pandemic. Nevertheless, overall profitability per equity increased after the pandemic, suggesting that despite the significant challenges, banks were able to improve the effectiveness of their equity.

NPM: The sharp decline in NPM during the pandemic indicated a reduction in net profit efficiency. However, the analysis showed a significant increase in NPM post-pandemic.

### **Liquidity Ratios (CR, QR)**

CR: The stability of the current ratio demonstrates the banks' ability to maintain liquidity both before and after the pandemic, with no statistically significant changes.

QR: Although there was a slight increase in the quick ratio, the difference was not statistically significant, indicating that bank liquidity remained stable even under difficult conditions during the pandemic.

### **Solvency Ratios (DAR, DER)**

DAR: No significant changes were found in the debt-to-assets ratio before and after the pandemic, demonstrating the banks' resilience in maintaining capital stability.

DER: The stability in the debt-to-equity ratio suggests that despite the challenges, banks in the IDX LQ45 were able to maintain a balance between equity and debt without taking on excessive risks.

The statistical analysis indicated significant differences in profitability (ROA, ROE, NPM) between the pre- and post-pandemic periods. However, for liquidity (CR, QR) and solvency (DAR, DER), no significant changes could be concluded from the statistical tests.

This study contributes to the literature on the impact of the COVID-19 pandemic on the banking sector, particularly in terms of changes in profitability, liquidity, and solvency ratios. The findings suggest that while the pandemic put pressure on profitability, liquidity, and solvency remained stable.

Bank management should continue to focus on improving profitability without compromising liquidity and solvency. Credit restructuring strategies and risk management policies can help enhance efficiency in the post-pandemic period. Banks should also continuously monitor their financial condition and maintain a cautious approach to debt and equity management during uncertain times.

### **Suggestions**

Future research could consider incorporating other macroeconomic variables such as inflation or interest rates to further analyze the pandemic's impact on the

banking sector. Additionally, a more in-depth analysis of the role of government policies and monetary authorities in maintaining financial stability during the pandemic would provide more comprehensive insights.

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