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## BANK HEALTH LEVEL ANALYSIS BEFORE, DURING, AND AFTER COVID-19 PANDEMIC

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### ABSTRACT

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The COVID-19 pandemic has weakened the economy, causing third-party funds to grow, but credit interest has decreased, making banks face difficulties channeling funds to generate interest income. The implementation of social restrictions has led to many companies being unable to operate, which has slowed down the repayment of obligations by debtors, ultimately affecting banking health. This study aims to analyze differences in health levels of banks listed on the Indonesia Stock Exchange before, during, and after the COVID-19 pandemic. The research design is quantitative, using an event study to assess the impact of the COVID-19 pandemic. Bank health is measured using risk profile, good corporate governance (GCG), earnings, and capital. Data analysis was performed using the Wilcoxon signed-rank test. The results show differences in liquidity risk, operational risk, profitability, and capital during the periods before and during the pandemic, while there were no differences in credit risk, market risk, and GCG. During and after the pandemic, there were differences in credit risk, liquidity, operational risk, GCG, profitability, and capital, while market risk showed no difference. Before and after the pandemic, credit risk, liquidity, operational risk, and capital showed differences, while market risk, GCG, and profitability showed no differences.

**Keywords:** Bank Health Level, Risk Profile, Good Corporate Governance, Earnings, Capital, Covid-19 Pandemic.

#### INTRODUCTION

The year 2020 marked a pivotal moment that will be remembered due to the widespread impact of the COVID-19 pandemic, which resulted in significant losses across various sectors. The implementation of Large-Scale Social Restrictions limited the mobility of individuals to reduce interpersonal contact. As a result, people were forced to stay home, leading to a decline in economic activity. Economic growth experienced a downturn, with the first quarter of 2020 still reflecting a positive growth rate of 2.97%, representing a decline from 4.97% in the fourth quarter of 2019. This downward trend continued into the second quarter of 2020, with a contraction of 5.32% (Statistics Indonesia, 2023). This situation directly impacted the banking sector, where third-party

funds grew while credit issuance declined, preventing banks from channeling funds effectively to generate interest income.

In 2020, third-party funds received by banks amounted to IDR 6,665 trillion, compared to IDR 5,999 trillion in the previous year, reflecting an 11.11% growth, which was significantly higher than the 6.54% growth recorded in 2019 (PERBANAS, 2024). This increase was primarily attributed to higher savings during the pandemic (Sitanggang & Hidayat, 2020). Conversely, credit development saw a decline in the same year, totaling IDR 5,482 trillion, a decrease from IDR 5,617 trillion in 2019 (PERBANAS, 2024), marking the first time in recent years that credit issuance experienced a contraction. This situation resulted in banks being unable to channel funds effectively into credit services. The decline in profits was primarily due to reduced operational income from financing in sectors directly impacted by the pandemic (Ilhami & Thamrin, 2021). Banks could not generate sufficient interest income to cover interest on customer deposits, savings, or term deposits.

The Financial Services Authority has advised banks to adhere to prudential banking principles, professionalism, innovation, and integrity to achieve optimal and sustainable growth (Irawati, 2023). Banks serve as key intermediaries, connecting those with surplus funds to those needing capital (Ariyani, 2021), and are integral to driving economic activity. Therefore, banks must consider the interests of all stakeholders, not just shareholders. Stakeholders are individuals or groups interested in the organization who can influence or be influenced by its activities. Establishing strong relationships with stakeholders can yield long-term advantages for the institution, including enhanced operational stability and reputation (Chaerunisa & Siregar, 2023). The trust the public placed in banks during the pandemic is a testament to the success of banks in maintaining their stakeholder relationships, ensuring that public funds were managed securely and effectively even in the face of difficult circumstances.

Bank Indonesia (BI) recognizes banks' vital role in the economy, as outlined in Bank Indonesia Regulation Number 13/1/PBI/2011, which governs the Assessment of the Health Level of Commercial Banks. This regulation requires banks to maintain and/or improve their health by applying prudential principles and risk management (Bank Indonesia, 2011). The assessment conducted by BI serves as a means of supervision for banks and helps sustain public trust. Public confidence increases when a bank is in good health, creating a mutually reinforcing relationship between the two objectives (Huda, 2021). Assessment of the bank's health level, namely RGEC, encompasses Risk profile, Good Corporate Governance (CGC), Earnings/Rentability, and Capital (Suripto et al., 2022). The pandemic has affected the health of banks, thus necessitating research to assess its impact. Previous studies have primarily focused on two periods, namely before and after the pandemic, while this study adds the period after the pandemic, where, after the pandemic, economic conditions began to improve, and the role of banks as intermediary institutions will increase, which can affect the level of health. Therefore, this study aims to analyze the differences in the health levels of banks across three distinct periods: before, during, and after the COVID-19 pandemic.

The risk profile measures the likelihood of risks occurring and evaluates how banks manage and mitigate risks through risk management strategies (Saputra et al., 2024). In the periods before and during the pandemic, Sari & Wijaya (2024) and Sullivan & Widodoatmodjo (2021) found differences due to the inverse relationship between the growth of third-party funds and credit growth, which prevented banks from channeling credit, resulting in losses. However, Dewi et al. (2022) and Ilhami & Thamrin (2021) found no significant differences, attributing this to the banks' efforts to alleviate the

burden on customers, whose incomes had decreased due to the pandemic. Banks adopted policies to reduce loan amounts and extend repayment periods. During and after the pandemic, Saputra et al. (2024) observed differences due to the increased demand for credit, as economic activities began to improve after the pandemic, which allowed for unhindered distribution and management of funds.

On the other hand, Wahyudin & Sulfitri (2024) found no differences, attributing this to the banking sector's ability to maintain risks at manageable levels. In the pre- and post-pandemic periods, Amalia et al. (2024) identified differences due to improved performance in fund distribution, allowing banks to earn interest income to meet their obligations and restore stakeholder confidence. However, Yolanda et al. (2024) reported no significant differences.

The quality of bank management in applying the principles of Good Corporate Governance in its operations is the primary objective of the GCG assessment in the banking sector (Wahyudin & Sulfitri, 2024). GCG reflects the implementation of these principles in banks' operational activities (Raihan & Ramadhan, 2023). In the periods before and during the pandemic, Amalia et al. (2024) found differences, as bank management applied GCG principles more rigorously during the pandemic to maintain stability. This finding contrasts with Fatimah et al. (2023), who reported no significant differences, suggesting that management implemented GCG principles effectively during the pandemic, similar to pre-pandemic practices. During and after the pandemic, Saputra et al. (2024) observed differences, as banks were able to enhance the implementation of GCG post-pandemic to support the improving demand for credit. However, Wahyudin & Sulfitri (2024) found no differences, attributing this to banks maintaining their pre-pandemic GCG practices. In periods before and after the pandemic, Yulianti et al. (2024) identified differences, noting that the implementation of GCG after the pandemic still required improvement compared to the pre-pandemic period, as the banking sector still needed attention due to the ongoing economic recovery. In contrast, Yolanda et al. (2024) found no differences, highlighting that banks consistently evaluated their GCG practices to assess their health status.

Earnings measure a company's capacity to generate profits using its available resources. Ilhami & Thamrin (2021) and Kartika & Riadi (2022) identified differences before and during the pandemic, attributing this to investor sentiment, as many felt that the government had not shown sufficient seriousness in addressing the pandemic. It led to a health crisis and negative sentiment, causing many investors to withdraw their funds from the capital market, contributing to a decline in profits (Mayasari et al., 2022). This finding is supported by Muhammad & Nawawi (2022), who noted that the operational performance of Islamic banks declined during the pandemic. However, Candera et al. (2021) found no significant differences. In the periods during and after the pandemic, Wahyudin & Sulfitri (2024) observed differences in earnings due to credit restructuring policies implemented for debtors affected by the pandemic, aimed at reducing credit risk (Ilahiyah et al., 2021). Bank profits improved as interest income increased due to debtors beginning to repay their loans. Wahyudin & Sulfitri (2024) found differences in earnings when measured by Return on Assets (ROA), while no differences were observed in Net Interest Margin (NIM). In the pre- and post-pandemic periods, Saputra et al. (2024) and Yulianti et al. (2024) identified differences in earnings, with increased interest income indicating a recovery to pre-pandemic levels. However, Yolanda et al. (2024) found no differences, suggesting that banks demonstrated solid post-pandemic capabilities in managing funds, leading to improved performance after a downturn.

Capital reflects a bank's ability to manage future risks. In the periods before and during the pandemic, Sullivan & Widodoatmodjo (2021) and Kartika & Riadi (2022) observed differences, attributed to increased third-party funds. Contrasting with Muhammad & Nawawi (2022), who found no significant differences, attributing this to the tightening of regulations on capital adequacy by international banking regulators, the implementation of liquidity standards, and the development of mitigation policies to prevent financial market failures (Dwiputri & Sampurno, 2022). Yulianti et al. (2024) observed differences during and after the pandemic, as banks maintained prudential practices throughout the pandemic, continuing these measures even as the situation stabilized. Conversely, Wahyudin & Sulfitri (2024) found no differences, arguing that banks are responsible for managing public funds, ensuring that their capital is sufficient to face various risks (Azmi et al., 2021). In the periods before and after the pandemic, Yolanda et al. (2024) identified differences, noting that banks were cautious in channeling funds during the pandemic to mitigate risks arising from an unstable environment. In contrast, Yulianti et al. (2024) found that the capital position remained strong before and after the pandemic.

The success of banks in attracting public funds is influenced by factors such as public trust, the bank's image, service quality, financial condition, and expected profitability (Rahayu et al., 2021). Bank health refers to the ability of a bank to operate normally and fulfill its obligations under banking regulations (Sodik et al., 2023). It is crucial, as the management and distribution of public funds are key responsibilities of banks (Febrianto & Fitriana, 2020). Banks must take actions that safeguard both their interests and customers (Fahrial, 2018). Assessing bank performance is essential to determine its health, ensuring the public feels secure in depositing their funds (Pratikto & Rahmawati, 2021). Bank Indonesia (BI) issued a decision in 1997 (BI Circular No. 30/12/KEP/DIR) on assessing bank health using the CAMEL model, which includes Capital, Assets, Management, Earnings, and Liquidity. It was later revised to CAMELS with the addition of Sensitivity to Market Risk. 2011 BI further refined the model by incorporating Good Corporate Governance (GCG), resulting in the RGEC framework, as outlined in PBI No. 13/1/PBI/2011. Under this framework, banks must conduct a self-assessment of their health and report it to BI, using the Risk-Based Bank Rating (RBBR) approach, which includes the Risk Profile, GCG, Earnings, and Capital.

Risk profile measures the likelihood of risks occurring and evaluates the effectiveness of a bank's efforts in managing or avoiding these risks, along with its risk management strategies. Risk profile includes credit, market, liquidity, operational, legal, strategic, compliance, and reputational risks (Saputra et al., 2024). The largest source of bank revenue comes from credit provided (Utami & Silaen, 2018). If the credit extended becomes problematic due to the failure of debtors to fulfill their obligations according to agreed terms (Indonesian Financial Services Authority, 2016). Market risk reflects the bank's effectiveness in managing potential losses from market conditions, such as interest rates, exchange rates, stock prices, and commodity prices (Kusnanto, 2018). Liquidity risk arises when a bank fails to meet its commitments to repay funds and interest to customers (Sunaryo et al., 2021). Third-party funds are a liability for banks (Ainulyaqin et al., 2023). Operational risk stems from failures in the bank's internal processes, technology system failures, or even natural disasters, potentially leading to financial losses (Utami & Silaen, 2018). Banks earn income from interest paid by customers, while operational costs arise from interest paid to depositors (Damayanti & Mawardi, 2022).

Good Corporate Governance reflects the quality of a bank's management in implementing GCG principles within its operational activities (Wahyudin & Sulfitri,

2024). Banks must conduct their business by GCG principles to enhance performance, strengthen relationships with partners, ensure compliance with applicable regulations, and incorporate ethical values within the banking industry, as outlined in Bank Indonesia Circular No. 15/15/DPNP/2013 (Bank Indonesia, 2013).

Bank earnings indicate the capacity to generate profit by utilizing available resources (Sullivan & Widodoatmodjo, 2021). Earnings can be assessed through Return on Assets (ROA) and Net Interest Margin (NIM). ROA measures management's success in generating profit from asset management (Sodik et al., 2023). NIM reflects how effectively a bank maximizes its productive assets to generate profit. Net interest income is the difference between interest income and interest expenses paid (Rahmat & Ruchiyat, 2021). A bank's productive assets include funds allocated to generate income through loans, securities, placements in other banks, and investments (Ruslan, 2020).

Capital reflects a bank's ability to manage future risks. Capital is assessed using the Capital Adequacy Ratio (CAR) (Saputra et al., 2024). CAR evaluates the adequacy of capital to face future risks. The pandemic led to an increase in third-party funds, while credit demand declined. As a result, the funds received by banks could not be channeled into loans, causing a decrease in interest income and insufficient profits to cover both principal and interest payments. This situation contributed to a decline in bank health from the pre-pandemic to the pandemic period.

Before the pandemic, banks' risk factors were present but remained manageable. In 2019, third-party funds and loan disbursement growth contributed to a controlled risk environment (Latifa & Zuhri, 2022). During the pandemic, credit growth reversed regarding third-party funds, where the funds received by banks increased, but credit disbursement declined. When banks cannot channel credit, despite accumulating significant funds, it may lead to losses (Latifa & Zuhri, 2022). This situation threatens banks, as they cannot generate profit to pay interest on deposits, savings, and time deposits, which could decrease stakeholder trust in banks. It is supported by research from Candera et al. (2021), which demonstrated a difference in risk profiles before and during the pandemic in conventional banks.

H<sub>1a</sub> : There is a Difference in Bank Health Levels in The Risk Profile Before and During The COVID-19 Pandemic

The implementation of GCG was crucial during the pandemic to prevent management actions that may not align with stakeholder expectations (Pulungan & Adiwibowo, 2022). During the pandemic, GCG practices became stricter as banks exercised more caution in their operations to maintain stability despite the crisis. It aligns with the findings of Amalia et al. (2024) and Yulianti et al. (2024), who demonstrated a difference in GCG practices before and during the pandemic.

H<sub>1b</sub> : There is a Difference in The Bank's Health Level in Terms of Good Corporate Governance Before and During The COVID-19 Pandemic

Profit assesses the effectiveness of a bank's operational activities in generating earnings (Fatimah et al., 2023). Stakeholders evaluate a company's success based on management's ability to generate profit (Kusumawardani, 2022). The pandemic caused a decline in profits, as investors felt the government had not demonstrated sufficient commitment to addressing the crisis. As health-related issues escalated and negative sentiment emerged, many investors withdrew their funds from the capital market, ultimately reducing profits (Mayasari et al., 2022). The decline in interest income, resulting from reduced credit disbursement, led banks to focus on liquidity management

to maintain stability during the pandemic (Candera & Indah, 2021). It is supported by Sullivan & Widodoatmodjo (2021), Sari & Wijaya (2024), and Kartika & Riadi (2022), who found differences in earnings.

**H<sub>1c</sub> : There is a Difference in Bank Health Levels in Terms of Earnings Before and During The COVID-19 Pandemic**

International banking regulators tightened regulations concerning capital adequacy, implemented liquidity standards, and developed mitigation policies to prevent failures in the global financial market (Dwiputri & Sampurno, 2022). During the pandemic, economic activities were disrupted due to the implementation of large-scale social restrictions and widespread layoffs, which caused debtors to require more time to fulfill their obligations, thereby increasing credit risk for banks. In response, banks increased their loan loss provisions, which led to a decline in capital adequacy (Candera & Indah, 2021). This finding is supported by Sullivan & Widodoatmodjo (2021), Sari & Wijaya (2024), and Kartika & Riadi (2022), who observed differences in capital.

**H<sub>1d</sub> : There is a Difference in Bank Health Levels in Terms of Capital Before and During The COVID-19 Pandemic**

During the pandemic, the mismatch between third-party funds and credit hindered fund management, negatively impacting banks. However, as the government relaxed its policies and the pandemic came under control, public activities gradually resumed. It allowed for a more balanced alignment between third-party funds and credit demand. As a result, bank health improved, leading to a noticeable difference in bank health levels between the pandemic and post-pandemic periods.

Fund management was hindered during the pandemic due to an imbalance between third-party funds and credit, causing banks to incur losses. Bank risk increased as income from credit decreased, primarily due to PSBB, which halted economic activities. As the pandemic came under control, banks' role as an intermediary began to recover, with increased credit demand, a revival in trade, and growth in the MSME sector, driven by the gradual relaxation of PSBB (Wahyudin & Sulfitri, 2024). This recovery improved bank risk conditions as channeling and managing public funds resumed smoothly. This situation is supported by Saputra et al. (2024) and Yulianti et al. (2024), who found that bank health improved and reduced corporate risk after the pandemic.

**H<sub>2a</sub> : There is a Difference in The Health Level of Banks in Terms of Risk Profile Between The Post-Pandemic and Pandemic Periods**

The implementation of GCG in the banking sector, which faced an economic crisis due to the pandemic, is crucial because banks play an essential role as economic drivers (Pulungan & Adiwibowo, 2022). Banks are a key source of financing for the public, who are gradually resuming spending activities previously disrupted during the pandemic. Banks must maintain liquidity to support credit demand, contributing to a gradual economic recovery. Therefore, the implementation of GCG post-pandemic still requires improvements. It aligns with the research by Saputra et al. (2024) and Yulianti et al. (2024), which indicates better GCG implementation post-pandemic.

**H<sub>2b</sub> : There is a Difference in The Health Level of Banks in Terms of GCG Between The Post-Pandemic and Pandemic Periods**

Investors believed that the government had insufficient efforts to address the pandemic, leading them to secure their funds by withdrawing from the capital market, impacting banking profits (Mayasari et al., 2022). The decline in profits was further

exacerbated by the reduction in credit, resulting in lower bank income. In response, banks implemented credit restructuring policies for debtors affected by the pandemic, aiming to mitigate credit risk (Ilahiyah et al., 2021). Bank profits gradually improved as interest income rose, as debtors could repay their loans, allowing banks to fulfill their obligations and pay interest to customers. It is consistent with the findings of Wahyudin & Sulfitri (2024) and Yulianti et al. (2024), which indicate an increase in earnings post-pandemic.

**H<sub>2c</sub> : There is a Difference in The Health Level of Banks in Terms of Earnings Between The Post-Pandemic and Pandemic Periods**

During the pandemic, banks adhered to the principle of prudence in channeling funds to avoid credit risk (Yolanda et al., 2024), considering that the ability of debtors to repay loans decreased due to the PSBB and layoffs. This situation ensured that the bank's capital remained safe. Prudence continued even after the pandemic was controlled, as the economic situation remained unstable. Banks must maintain good conditions because of their responsibility in managing public funds, which means their capital must be adequate to face various risks (Azmi et al., 2021). It is supported by the research of Yulianti et al. (2024) and Saputra et al. (2024), which shows that banks' capital increased after the pandemic.

**H<sub>2d</sub> : There is a Difference in The Health Level of Banks in Terms of Capital Between The Post-Pandemic and Pandemic Periods**

After the pandemic was controlled, the government began easing its restrictions, gradually recovering public activities. Third-party funds and credit demand started to balance, causing bank health to improve, approaching pre-pandemic levels, though not fully restored. It resulted in differences in bank health before and after the pandemic. A study indicates that while banks remained healthy, notable differences were observed in their health levels pre- and post-pandemic (Ningsih, 2023).

After the pandemic, bank credit surpassed pre-pandemic levels, accompanied by an increase in third-party funds. Banks could distribute loans and generate interest to meet their obligations, reducing risk. As bank performance improved, stakeholders gained confidence in management's ability to address existing risks. Post-pandemic, the bank's risk profile improved due to recovery. It is supported by Yulianti et al. (2024), who found a decrease in risk following the pandemic.

**H<sub>3a</sub> : There is a Difference in Bank Health Regarding Risk Profiles Before and After The COVID-19 Pandemic**

GCG prioritizes the interests and rights of stakeholders by providing precise and accurate information about a company's condition (Pulungan & Adiwibowo, 2022). Post-pandemic, the implementation of GCG still requires improvement, as the banking sector's condition needs attention, given that the economy has not fully recovered. Yulianti et al. (2024) support this, finding that GCG implementation improved after the pandemic.

**H<sub>3b</sub> : There is a Difference in Bank Health Regarding GCG Before and After The COVID-19 Pandemic**

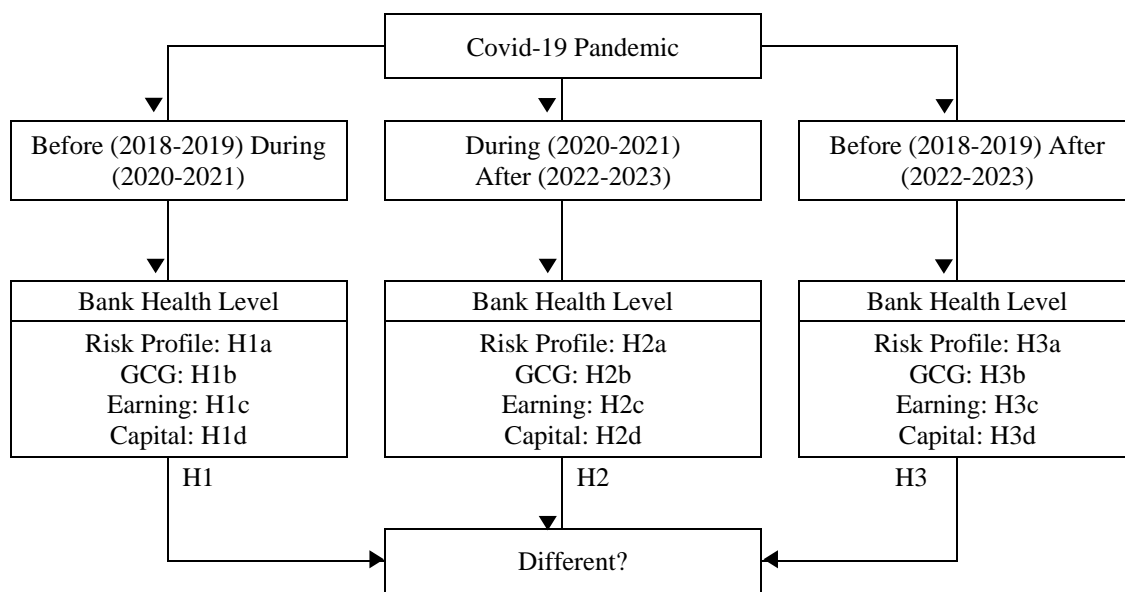
The banking sector improved post-pandemic, as evidenced by stable and generally positive third-party funds and growing credit demand. It led to increased interest income, which had previously declined due to reduced bank income from loans, while the obligation to pay interest to depositors remained (Tiono & Djaddang, 2021). As a result, earnings were similar to pre-pandemic levels. This performance improvement reflects the

bank's success in restoring stakeholder confidence. It is supported by Yulianti et al. (2024), who found that earnings post-pandemic were better than before.

H<sub>3c</sub> : There is a Difference in Bank Health Regarding Earnings Before and After The COVID-19 Pandemic

Before the pandemic, banks' capital and reserves increased. Bank Indonesia regulations require banks to maintain minimum capital based on risk profiles to ensure stability, support intermediation, and protect public funds. Post-pandemic, banks continued to increase capital due to ongoing instability as the recovery phase persisted (Tiono & Djaddang, 2021), as many banks experienced capital declines during the pandemic due to reduced profits. It is supported by Yolanda et al. (2024) and Yulianti et al. (2024), who found differences in capital before and after the pandemic.

H<sub>3d</sub> : There is a Difference in Bank Health Regarding Capital Before and After The COVID-19 Pandemic



**Figure 1. Research Model**

Source: Data processed

Figure 1 shows that the level of bank health, as measured by RGEC in the period before, during, and after the COVID-19 pandemic, is thought to be different.

## RESEARCH METHODS

The research employs a quantitative design using an event study method, namely the COVID-19 pandemic, to analyze the differences in health levels of banks before, during, and after the COVID-19 pandemic. The study spans a period of six years, divided into three phases: two years before the pandemic (2018–2019), two years during the pandemic (2020–2021), and two years after the pandemic (2022–2023). The research variable is the health level of banks, which refers to the ability of banks to operate normally and meet their obligations according to the prevailing banking regulations (Sodik et al., 2023). The health level of banks is assessed using RGEC, which includes: Risk Profile, GCG, Earnings, and Capital (Wahyudin & Sulfitri, 2024)).

Risk profile measures the extent to which risks are likely to occur and how effectively the bank manages and mitigates these risks based on its risk management

strategy (Yulianti et al., 2024). Risk profile consist of (1) credit risk refers to the risk that a borrower will be unable to fulfill their obligations to the bank (Nisa et al., 2024), assessed through Non-Performing Loan (NPL) ratio (Wahyudin & Sulfitri, 2024), (2) market risk refers to the risk of losses arising from changes in market values (Indrawan & Rikumahu, 2023), assessed through Interest Rate Risk (IRR) (Maramis, 2019), (3) liquidity risk refers to the risk that a bank is unable to meet its obligations (Indrawan & Rikumahu, 2023), assessed through Loan-to-Deposit Ratio (LDR) (Wahyudin & Sulfitri, 2024), and (4) operational risk refers to the risk arising from inadequate internal processes (Nurapiyah, 2019), assessed through Operating Expenses to Operating Income Ratio (BOPO) (Sullivan & Widodoatmodjo, 2021). Good Corporate Governance (GCG) is assessed based on self-assessment and reports on the implementation of GCG, which is categorized into five levels, with a lower rating indicating better implementation of GCG (Wahyudin & Sulfitri, 2024). Earnings assess a bank's ability to enhance its operational profits (Fatimah et al., 2023). Earnings are measured by Return on Assets (ROA), which indicates the bank's ability to manage its assets to generate profits (Laurensia et al., 2024), and Net Interest Margin (NIM) reflects the net interest income earned from the management of the bank's productive assets (Artha et al., 2022). Capital represents an evaluation of the adequacy and management of a bank's capital (Saputra et al., 2024), which is measured by the Capital Adequacy Ratio (CAR) that reflects the adequacy of capital to absorb potential losses that the bank may face (Kurniasari & Zunaidi, 2022).

The population of this study consists of banks listed on the Indonesia Stock Exchange, totaling 46 banks. The sample was selected based on the following criteria: banks that published consecutive annual reports from 2018 to 2023, where four banks were excluded for not meeting this criterion, and banks that had interest income, with three banks excluded for not meeting this condition. As a result, the final sample consists of 39 banks. Data analysis was conducted using different tests, including normality and hypothesis tests (Ghozali, 2018). A paired sample t-test was used if data were normally distributed, whereas the Wilcoxon signed-rank test was applied if not normally distributed.

## RESULTS AND DISCUSSION

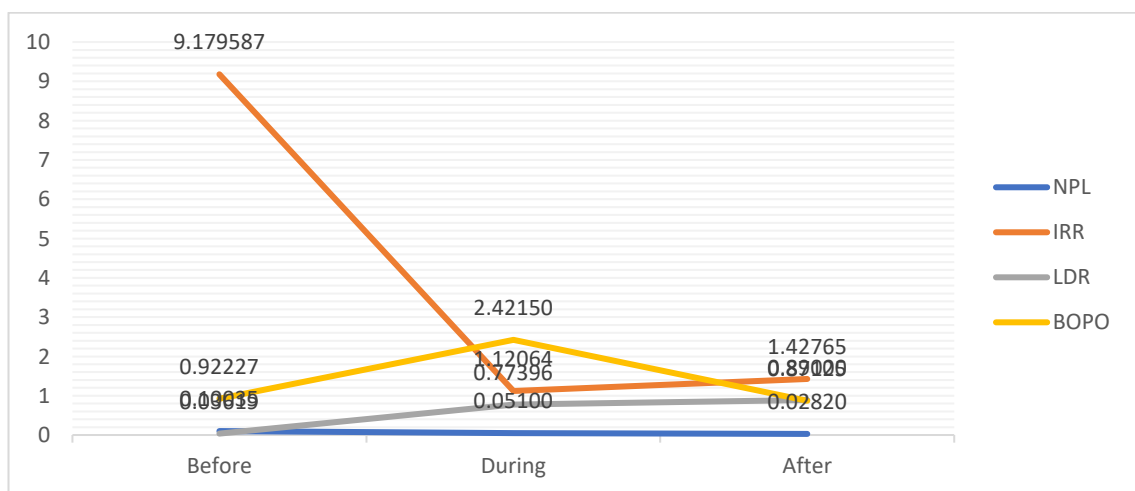
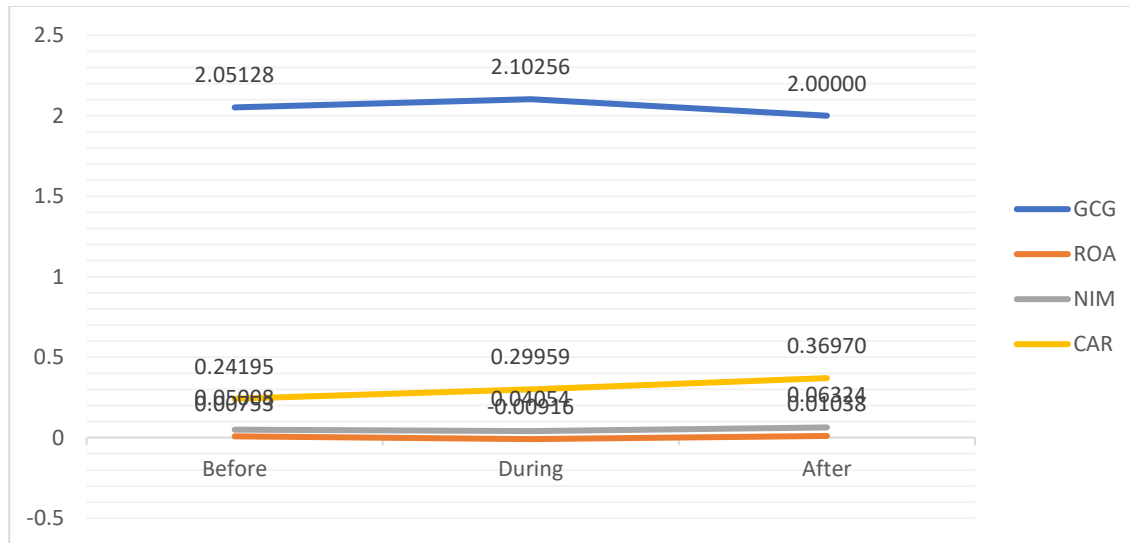


Figure 1. Risk Profile (NPL, IRR, LDR, BOPO) Chart

Source: Data processed



**Figure 2. GCG, Profitability (ROA, NIM), and Capital (CAR) Chart**

Source: Data processed

The data processing result in Figure 2 shows that in Risk Profile, Credit Risk (NPL) showed a decrease, Market Risk (IRR) indicated a decline during and after the pandemic, Liquidity Risk (LDR) reflected an increase in third-party funds allocated to loans, and Operational Risk (BOPO) showed an increase during the pandemic. Corporate Governance showed little change. In Earnings, ROA decreased during the pandemic, even turning negative, but became positive after the pandemic; meanwhile, NIM decreased but increased afterward. Regarding Capital, CAR increased from pre-pandemic to post-pandemic.

**Table 1.1. Normality Test**

Variable	Sig.	Result
NPL_Before	0.014	not normally distributed
NPL_During	0.000	not normally distributed
NPL_After	0.005	not normally distributed
IRR_Before	0.000	not normally distributed
IRR_During	0.000	not normally distributed
IRR_After	0.000	not normally distributed
LDR_Before	0.014	not normally distributed
LDR_During	0.044	not normally distributed
LDR_After	0.000	not normally distributed
BOPO_Before	0.005	not normally distributed
BOPO_During	0.000	not normally distributed
BOPO_After	0.000	not normally distributed
GCG_Before	0.000	not normally distributed
GCG_During	0.000	not normally distributed
GCG_After	0.000	not normally distributed
ROA_Before	0.000	not normally distributed
ROA_During	0.000	not normally distributed

**Table 1.2. Normality Test (Continuation)**

Variable	Sig.	Result
ROA_After	0.000	not normally distributed
NIM_Before	0.002	not normally distributed
NIM_During	0.200	normally distributed
NIM_After	0.000	not normally distributed
CAR_Before	0.000	not normally distributed
CAR_During	0.000	not normally distributed
CAR_After	0.000	not normally distributed

Source: Annual Report 2018-2023, processed (2024)

Normality test shows that one variable is normally distributed and 27 variables are not normally distributed, so the Wilcoxon signed rank test was used for hypothesis testing.

**Table 2. Hypothesis Test**

Variable	Z	Asymp. Sig. (2-tailed)	Result ( $\alpha = 0.05$ )	Hypothesis
NPL_Before–During	-0.021	0.983	Not Significant	H1a rejected
IRR_Before–During	-0.051	0.960	Not Significant	H1a rejected
LDR_Before–During	-3.559	0.000	Significant	H1a accepted
BOPO_Before–During	-2.554	0.011	Significant	H1a accepted
GCG_Before–During	-1.155	0.248	Not Significant	H1b rejected
ROA_Before–During	-3.082	0.002	Significant	H1c accepted
NIM_Before–During	-4.682	0.000	Significant	H1c accepted
CAR_Before–During	-3.447	0.001	Significant	H1d accepted
NPL_During–After	-3.021	0.003	Significant	H2a accepted
IRR_During–After	-0.490	0.624	Not Significant	H2a rejected
LDR_During–After	-3.014	0.003	Significant	H2a accepted
BOPO_During–After	-4.326	0.000	Significant	H2a accepted
GCG_During–After	-2.271	0.023	Significant	H2b accepted
ROA_During–After	-3.866	0.000	Significant	H2c accepted
NIM_During–After	-4.917	0.000	Significant	H2c accepted
CAR_During–After	-2.861	0.004	Significant	H2d accepted
NPL_Before–After	-2.296	0.022	Significant	H3a accepted
IRR_Before–After	-0.689	0.491	Not Significant	H3a rejected
LDR_Before–After	-2.065	0.039	Significant	H3a accepted
BOPO_Before–After	-2.770	0.006	Significant	H3a accepted
GCG_Before–After	-1.069	0.285	Not Significant	H3b rejected
ROA_Before–After	-0.726	0.468	Not Significant	H3c rejected
NIM_Before–After	-0.286	0.775	Not Significant	H3c rejected
CAR_Before–After	-4.410	0.000	Significant	H3d accepted

Source: Annual Report 2018-2023, processed (2024)

## **Bank Health Before and During The COVID-19 Pandemic**

The bank's health in risk profile for credit risk showed hypothesis was rejected, no difference between pre-pandemic and pandemic periods, aligns with the research of Ilhami & Thamrin (2021) and Arrizky (2022), which suggested that during the pandemic, banks became more cautious and selective in providing new loans to mitigate the risk of credit deterioration. As a result, the amount of non-performing loans that could turn into bad loans remained controlled and did not increase. This contrasts with research by Sullivan & Widodoatmodjo (2021), Candera & Indah (2021), and Sari & Wijaya (2024), which indicated that banks must be accountable to stakeholders for the funds they collect. Successfully managing credit risk during a crisis increases stakeholder trust, demonstrating the bank's ability to manage funds effectively. Market risk showed hypothesis rejected, no difference between pre-pandemic and pandemic periods, aligns with the study by Amalia et al. (2024). During the pandemic, banks became more cautious and selective in providing new loans to ensure continued interest income. Banks set lower interest rates to prevent a sharp rise in interest expenses. As a result, IRR remained controlled and did not experience an increase. Banks must take measures to maintain stakeholder trust by managing market risk effectively. Liquidity risk showed that the hypothesis was accepted, and there was a difference between pre-pandemic and pandemic periods, aligning with the study by Kartika & Riadi (2022).

Before the pandemic, third-party fund growth was stable and even tended to increase, with rising loan demand, allowing banks to allocate received funds to loans for profit. In contrast, during the pandemic, public loan demand decreased, hindering the flow of funds. The decline in liquidity made meeting obligations to customers entitled to returns difficult, reducing stakeholder trust. This contrasts with the findings of Sullivan & Widodoatmodjo, (2021), Sari & Wijaya (2024), and Ilhami & Thamrin (2021), who showed no differences, as banks attempted to reduce funds by allocating them to loans. Operational risk showed that the hypothesis was accepted; there is a difference between the pre-pandemic and pandemic periods, which is supported by Sullivan & Widodoatmodjo (2021) and Sari & Wijaya (2024). Before the pandemic, the growth of third-party funds was relatively stable and even increased. At the same time, loan demand was also high, allowing banks to channel funds into the credit sector and generate income. However, during the pandemic, loan demand drastically decreased, making it difficult to allocate funds, which impacted revenue. The decline in revenue could cause banks to struggle to meet their obligations to customers and reduce stakeholder trust.

The bank's health in GCG showed that the hypothesis was rejected, and there was no difference between the pre-pandemic and pandemic periods, as supported by Arrizky (2022). According to BI regulations, banks are required to implement GCG. Therefore, GCG implementation was maintained effectively and even strictly during the pandemic, as banks were more cautious in operations to ensure stability was preserved during the crisis. Banks maintain transparent, accountable, and responsible relationships with stakeholders through GCG implementation. However, this finding contrasts with Yulianti et al. (2024) and Saputra et al. (2024), who found that the implementation of GCG worsened during the pandemic.

The bank's health in earnings (ROA and NIM) showed that the hypothesis was accepted; there is a difference between the pre-pandemic and pandemic periods. This is supported by the studies of Kartika & Riadi (2022), Candera & Indah (2021), and Ilhami & Thamrin (2021). The pandemic caused a change in profits, influenced by negative investor sentiment regarding the government's perceived lack of seriousness in handling the crisis. This led many investors to withdraw their funds, resulting in declining profits.

This contrasts with the studies of Candera et al. (2021) and Arrizky (2022), which found no differences, as during the pandemic, banks were more cautious in issuing new loans to reduce the risk of default, increase interest income, and minimize credit loss provisions, thereby maintaining ROA stability. Banks must manage assets optimally, as declining profits indicate poor asset management efficiency, which diminishes stakeholder trust.

The bank's health in capital (CAR) showed that the hypothesis was accepted; there is a difference between the pre-pandemic and pandemic periods. This is consistent with the studies of Kartika & Riadi (2022), Sullivan & Widodoatmodjo (2021), Candera & Indah (2021), Arrizky (2022), and Sari & Wijaya (2024). During the pandemic, problematic productive assets increased, including loans where debtors took longer to meet their obligations, raising concerns that core capital would be unable to cover low-quality assets. Capital adequacy increased due to caution in anticipating risks as part of the bank's responsibility to stakeholders, even during the pandemic. However, the study by Ilhami & Thamrin (2021) showed no difference, as during the pandemic, banks became more conservative in distributing loans to minimize the rise of low-quality assets. The government and the Financial Services Authority implemented credit restructuring policies to assist debtors affected by the pandemic. This allowed banks to avoid a surge in NPL, thereby controlling loan loss provisions and preventing capital allocated to cover increasing credit risks.

### **Bank Health During and After The COVID-19 Pandemic**

The bank's health risk profile for credit risk showed that the hypothesis was accepted; there is a difference between the pandemic and post-pandemic periods, consistent with the study by Saputra et al. (2024), which showed a decrease in credit risk after the pandemic. As the pandemic began to be controlled, there was an increase in loan demand, recovery in trade activities, consumer behavior, and the MSME sector, coinciding with the easing of large-scale social restrictions. This situation improved risks, as the bank's fund management ran smoothly and enhanced stakeholder trust. However, this contradicts the studies of Wahyudin & Sulfitri (2024) and Yulianti et al. (2024), where, during the pandemic, banks implemented policies to ease the burden on debtors, ensuring that credit risk remained stable even after the pandemic. Market risk showed hypothesis rejected, no difference between pandemic and post-pandemic periods, which aligns with the study by Wahyudin & Sulfitri (2024). During the pandemic, loan demand decreased, leading to lower income, while third-party funds surged, resulting in higher interest expenses. After the pandemic, loan demand increased again, followed by stable growth in third-party funds. However, Saputra et al. (2024) found a difference. Banks must be able to manage income and interest expenses effectively to avoid causing losses to stakeholders due to the pandemic. Liquidity risk showed that the hypothesis was accepted; there is a difference between the pandemic and post-pandemic periods, aligning with Saputra et al. (2024), which showed an increase. During the pandemic, loan demand dropped due to economic uncertainty, reduced public income, and many businesses halting operations, causing cautiousness in extending credit. After the pandemic, as the economy began to recover, companies and individuals again required credit for working capital, investment, or consumption, enabling banks' intermediation function to operate. This was accompanied by slower growth in funds as purchasing power increased. However, this contradicts Wahyudin & Sulfitri (2024), where banks focused on providing loans to sectors that were less affected or benefited during the pandemic, thereby maintaining the stability of third-party funds and credit, generating profits for the bank and other stakeholders. Operational risk showed that the hypothesis was accepted; there is a difference between pandemic and post-pandemic periods, supported by the study by

Saputra et al, (2024). During the pandemic, loan demand dropped drastically, making it difficult to allocate funds, which led to a decrease in revenue. After the pandemic, many businesses and individuals required credit, increasing interest income. This contrasts with the study by Wahyudin & Sulfitri (2024), where, during the pandemic, banks reduced interest burdens for debtors so they could meet their obligations, allowing banks to still generate income, with adjustments made gradually according to economic conditions. Banks must effectively carry out their role of supporting economic activities as a form of stakeholder accountability.

The bank's health in GCG showed that the hypothesis was accepted; there is a difference between pandemic and post-pandemic periods, supported by Saputra et al. (2024) and Yulianti et al. (2024). Banks are a primary source of financing for the public, who began to return to active spending after the pandemic had halted it. Banks must maintain their liquidity to meet financing needs, assisting economic recovery. After the pandemic, banks became more cautious about preserving their health, leading to increased GCG. This contrasts with Nursasi et al. (2024) and Wahyudin & Sulfitri (2024), who found no difference, as banks continued implementing GCG well during and after the pandemic as a form of stakeholder accountability.

The bank's health in earnings (ROA and NIM) showed that the hypothesis was accepted; there is a difference between the pandemic and post-pandemic periods, supported by Yulianti et al. (2024) and Saputra et al. (2024). Banks' profits declined further during the pandemic due to decreased loan demand, reducing income. Wahyudin & Sulfitri (2024) support the difference in ROA, not NIM. After the pandemic, credit restructuring for debtors affected by the pandemic helped improve productive assets, alongside a recovery in loan demand, which contributed to increased income, enabling banks to meet obligations to pay interest and return funds to customers, and improve stakeholder trust.

The bank's health in capital (CAR) showed that the hypothesis was accepted; there is a difference between the pandemic and post-pandemic periods, in line with the studies of Saputra et al. (2024) and Yulianti et al. (2024). During the pandemic, banks applied prudence in disbursing funds to anticipate risks as part of their responsibility to stakeholders. This resulted in slower growth of risk-weighted assets compared to capital development. After the pandemic, economic activities began to improve, increasing the ability to meet obligations, supported by credit restructuring, which decreased risk-weighted assets. However, Wahyudin & Sulfitri (2024) found no difference, as the bank's caution continued after the economy stabilized. Banks are expected to be in a strong position because of their responsibility to manage public funds, so capital must be sufficient to face risks.

### **Bank Health Before and After The COVID-19 Pandemic**

The bank's health in the risk profile for credit risk showed that the hypothesis was accepted; there is a difference between before and after pandemic periods, in line with the study by Amalia et al. (2024). Before the pandemic, stable economic conditions allowed debtors to repay their loans, resulting in low non-performing loans. After the pandemic, banks faced pressure but continued to maintain the quality of new loans. However, NPL increased compared to the pre-pandemic period, as the economy was still in recovery. However, a study by Yolanda et al. (2024) found no difference, as after the pandemic, loan demand increased beyond pre-pandemic levels, and third-party funds also rose, allowing banks to channel funds into loans and increase interest income. Banks made efforts to minimize losses to improve stakeholder confidence. Market risk showed

a hypothesis rejected, no difference between the periods before and after the pandemic. Before the pandemic, the growth of third-party funds was followed by credit growth, allowing banks to manage funds effectively and control risk. After the pandemic, loan demand increased along with third-party fund growth at the same rate, resulting in conditions similar to those before the pandemic. However, Amalia et al. (2024) found a difference. The pandemic did not trigger losses due to the growth of interest expenses from liabilities, allowing banks to maintain sufficient funds to meet their obligations and enhance stakeholder confidence. Liquidity risk showed that the hypothesis was accepted; there is a difference between the periods before and after the pandemic, supported by Saputra et al. (2024). Before the pandemic, the growth of third-party funds was relatively stable, even increasing, along with high loan demand, allowing banks to allocate funds to loans and generate income. After the pandemic, as the economy began to recover, demand for credit from businesses and individuals increased, which allowed banks' intermediation function to resume effectively. However, Yolanda et al. (2024) did not find any difference. During the pandemic, banks implemented credit restructuring to assist affected debtors, maintaining the stability of credit distribution. As the economy began to recover, people needed credit assistance from banks to support their economic activities, highlighting the role of banking in financial recovery for stakeholders. Operational risk showed that the hypothesis was accepted; there is a difference between the periods before and after the pandemic, aligning with Amalia et al. (2024). Before the pandemic, economic activities ran normally, and banks were competing fiercely to attract public funds, offering higher interest rates, particularly for deposits. After the pandemic, interest expenses tended to decrease as third-party funds increased, leading banks to set lower interest rates, making interest expenses differ before and after the pandemic, causing the BOPO ratio to decline.

The bank's health in GCG showed that the hypothesis was rejected, with no difference between the periods before and after the pandemic, supported by Yolanda et al. (2024) and Saputra et al. (2024), where GCG implementation after the pandemic continued to be carried out effectively, given that the economy had not fully recovered. It contrasts with the study by Yulianti et al. (2024), which showed a difference because the government tightened supervision to ensure banking stability during the crisis. Banks had to adjust their GCG practices, leading to a difference from the pre-pandemic period. GCG is essential for stakeholders to understand how the bank operates transparently and responsibly.

The bank's health in earnings (ROA and NIM) showed that the hypothesis was rejected, with no difference between the periods before and after the pandemic, consistent with the study by Yolanda et al. (2024), which showed that banks gradually showed improvement after the pandemic. It can be seen from the stable growth of third-party funds and an increase in credit, which impacts asset growth and contributes to the improvement of previously declined income, bringing profits closer to pre-pandemic levels. This performance improvement reflects success in maintaining stakeholder confidence. However, the studies by Amalia et al. (2024), Saputra et al. (2024), and Yulianti et al. (2024) showed differences. During the pandemic, many debtors faced financial difficulties, which increased NPL, forcing banks to increase loan loss provisions that negatively impacted profitability.

The bank's health in capital (CAR) showed that the hypothesis was accepted; there is a difference between the periods before and after the pandemic, in line with the studies by Yolanda et al. (2024) and Yulianti et al. (2024). Before the pandemic, banks' capital and reserves increased due to BI regulations requiring the maintenance of a minimum

capital based on risk profile. After the pandemic, banks increased their capital because economic conditions were not entirely stable and still recovering. Debtors who had previously faced difficulties began to settle their obligations, partly due to credit restructuring, which reduced non-performing loans and other non-performing assets. Banks earned higher income as the economy recovered and credit demand increased, which improved profits and capital. However, the study by Saputra et al. (2024) showed no change in CAR. Banks responded to government policies to stabilize the banking sector and reduce non-performing assets, which helped mitigate risks, increase income, support the economy, and boost stakeholder confidence.

## CONCLUSION

During the period before and during the COVID-19 pandemic, there was no difference in credit risk profiles such as NPL, IRR, and GCG. However, credit risk profiles like LDR, BOPO, Earnings, and Capital showed significant differences. During the pandemic and post-pandemic period, there were no differences in credit risk profiles like IRR, while profiles such as NPL, LDR, BOPO, GCG, Earnings, and Capital showed differences. Between the pre- and post-pandemic periods, there were no differences in credit risk profiles such as IRR, GCG, and Earnings, while profiles such as NPL, LDR, BOPO, and Capital showed differences.

The research's implications for bank managers include a greater application of prudent principles, enabling them to maintain sound bank management under all circumstances. Similarly, regulators should be more responsive to abnormal economic conditions. The limitations of this study include the exclusion of legal risk, strategic risk, compliance risk, and reputational risk in the risk profile, making the analysis of the risk profile incomplete. Additionally, the measurement of GCG using bank self-assessment may introduce subjectivity. Therefore, it is suggested that future researchers include all risk profile measurements to provide a more comprehensive analysis and use more objective methods for measuring GCG. The implication for bank management is the importance of applying the principle of prudence in uncertain situations, such as the COVID-19 pandemic, as it significantly impacts the bank's health.

## REFERENCES

- Ainulyaqin, M. H., Rakhmat, A., Edy, S., & Maharani, S. (2023). Analysis of Third Party Funds (DPK), Risk and Fee Based Income (FBI) on Profit Sharing Financing in Islamic Commercial Banks. *International Journal of Islamic Economics and Business*, 8(1), 196–207. <https://e-journal.lp2m.uinjambi.ac.id/ojp/index.php/ijoieb/article/view/1875/905>
- Amalia, R., Mushowwir, A., & Istiqomah, R. (2024). Analysis of Bank Health Level Using RGEC (Risk Profile, Good Corporate Governance, Earning, Capital) Method (Study On Bank Muamalat Indonesia Before, During and Post The Covid-19 Pandemic). *Jurnal Sinar Manajemen*, 11(3), 190–206. <https://doi.org/10.56338/jsm.v11i3.6304>
- Ariyani, F. N. (2021). *Analysis of Bank Health Levels Using The RGEC Method at BUKU 4 Banks Before and During The COVID-19 Pandemic in Indonesia*. Brawijaya

University.

- Arrizky, N. A. (2022). Comparative Analysis of The Health Level of Islamic Commercial Banks Before and After The Impact of COVID-19. *Jurnal Proaksi*, 9(4), 427–437. <https://doi.org/10.32534/jpk.v9i4.3414>
- Artha, B., Sari, U. T., Bahri, B., & Khairi, A. (2022). Net Interest Margin: A Literature Study. *Jurnal Ekonomi Manajemen Dan Sosial (JEMES)*, 5(2), 60–69. <https://ojs.ejournalunigoro.com/index.php/JEMeS/article/view/317>
- Azmi, F., Pramono, N. H., & Wahyuni, M. (2021). Analysis of the Health Level of Islamic Banks Facing The Covid-19 Pandemic. *Jurnal Ilmiah Ekonomi Islam*, 7(3), 1880–1888.
- Bank Indonesia. (2011). *Bank Indonesia Regulation Number 13/1/PBI/2011 General Bank Health Level Assessment*. Financial Services Authority. <https://www.ojk.go.id/id/regulasi/Documents/Pages/PBI-tentang-Penilaian-Tingkat-Kesehatan-Bank-Umum/96.pdf>
- Bank Indonesia. (2013). *Bank Indonesia Circular Letter Number 15/15/DPNP Regarding The Implementation of Good Corporate Governance for Commercial Banks*. Financial Services Authority. [https://ojk.go.id/id/regulasi/Documents/Pages/SEBI-perihal-Pelaksanaan-Good-Corporate-Governance-bagi-Bank-Umum/SEBI 15.pdf](https://ojk.go.id/id/regulasi/Documents/Pages/SEBI-perihal-Pelaksanaan-Good-Corporate-Governance-bagi-Bank-Umum/SEBI%2015.pdf)
- Candera, M., & Indah, K. D. (2021). Financial Performance Islamic Banking: A Comparative Analysis Before and During The Covid-19 Pandemic in Indonesia. *International Journal of Business, Management and Economics*, 1(2), 44–52. <https://doi.org/10.47747/ijbmer.v1i2.201>
- Candera, M., Muslimin, A., & Permatasari, D. (2021). Banking Financial Performance Before and During The Covid 19 Pandemic in Indonesia: Analysis of Comparison Between Islamic and Conventional Banking. *Information Technology in Industry*, 9(1), 976–986. <https://doi.org/10.17762/itii.v9i1.231>
- Chaerunisa, A. B., & Siregar, S. V. (2023). Implementation of Stakeholder Engagement in Sustainable Development Case Study at PT XYZ. *Owner*, 7(4), 2956–2969. <https://doi.org/10.33395/owner.v7i4.1640>
- Damayanti, A. C., & Mawardi, W. (2022). The Effect of Bank Size, Loans to Deposit Ratio (LDR), Capital Adequacy Ratio (CAR), Non-Performing Loans (NPL), Income Diversification, and Operating Income (BOPO) on Bank Performance in Indonesia (Study on Conventional Commercial Banks Listed on The Ind. *Diponegoro Journal of Management*, 11(1), 1–13.
- Dewi, Y. M., Febriyanto, F., & Septiana, N. (2022). Comparative Analysis of Islamic Banking Financial Performance Before and During the COVID-19 Pandemic: A Study of Indonesian Islamic Banking Companies Registered with The Financial Services Authority (OJK). *SNPPM(Seminar Nasional Penelitian Dan Pengabdiankepada Masyarakat)*, 4(1), 102–109. <https://prosiding.ummetro.ac.id/index.php/snppm/article/view/109/84>
- Dwiputri, A. N. A., & Sampurno, R. D. (2022). Analysis of The Effect of Capital Adequacy Ratio and Loan-To-Deposit Ratio on Non-Performing Loans Before and After the COVID-19 Pandemic (Empirical Study on Conventional Banks Registered with the OJK for The 2018-2021 Period). *Diponegoro Journal of Management*, 11(6), 1–13. <https://ejournal3.undip.ac.id/index.php/djom/article/view/36608/28139>

- Fahrial, F. (2018). The Role of Banks in National Economic Development. *Ensiklopedia of Journal*, 1(1), 179–184. <https://jurnal.ensiklopediaiku.org/ojs-2.4.8-3/index.php/ensiklopedia/article/view/54>
- Fatimah, S., Yacobus, A., & Nurohim, H. (2023). Comparative Analysis of Banking Financial Performance Before and During the Covid-19 Pandemic Using RGEC Analysis at State-Owned Banks (Persero Commercial Banks) Listed on The Indonesia Stock Exchange for The 2019-2020 Period. *SINOMIKA Journal: Publikasi Ilmiah Bidang Ekonomi Dan Akuntansi*, 1(5), 1295–1310. <https://doi.org/10.54443/sinomika.v1i5.611>
- Febrianto, H. G., & Fitriana, A. I. (2020). Assessing The Level of Bank Health Using Risk Profile, Good Corporate Governance, Earnings, and Capital Analysis Methods in Islamic Banks in Indonesia. *Islamic Banking: Jurnal Pemikiran Dan Pengembangan Perbankan Syariah*, 6(1), 139–160. <https://doi.org/10.36908/isbank.v6i1.135>
- Ghozali, I. (2018). *Multivariate Analysis Application With Program IBM SPSS 25* (9th ed.). Badan Penerbit Universitas Diponegoro.
- Huda, M. (2021). The Role of the Financial Services Authority in Supervising Banking Health in Indonesia. *Salimiya: Jurnal Studi Ilmu Keagamaan*, 2(3), 61–77. <https://ejournal.iaifa.ac.id/index.php/salimiya/article/view/385>
- Ilahiyah, M. E., Padilla, M. A. E., & Palupi, D. (2021). Covid-19 and Its Impact on The Performance of State-Owned Banks in Indonesia. *Esensi: Jurnal Bisnis Dan Manajemen*, 11(1), 25–40. <https://core.ac.uk/download/pdf/573143272.pdf>
- Ilhami, I., & Thamrin, H. (2021). Analysis of The Impact of COVID-19 on the Financial Performance of Islamic Banking in Indonesia. *Jurnal Tabarru': Islamic Banking and Finance*, 4(1), 37–45. [https://doi.org/10.25299/jtb.2021.vol4\(1\).6068](https://doi.org/10.25299/jtb.2021.vol4(1).6068)
- Indonesian Financial Services Authority. (2016). *Financial Services Authority Indonesia Regulation Number 18 /POJK.03/2016*. Indonesian Financial Services Authority. <https://www.ojk.go.id/id/kanal/perbankan/regulasi/peraturan-ojk/Documents/Pages/POJK-Nomor-18.POJK.03.2016/SAL - POJK Manajemen Risiko .pdf>
- Indrawan, I. B. A., & Rikumahu, B. (2023). Analysis of Credit Risk, Market Risk, and Liquidity Risk in State-Owned Commercial Banks. *Jurnal Ilmiah Manajemen, Ekonomi, & Akuntansi (MEA)*, 7(3), 287–303. <https://doi.org/10.31955/mea.v7i3.3348>
- Irawati, I. (2023). *OJK Urges Banks to Implement Prudential Principles as Third Party Funds Slow*. Infobanknews. <https://infobanknews.com/dpk-melambat-ojk-minta-perbankan-terapkan-aspek-kehati-hatian/>
- Kartika, S., & Riadi, S. (2022). Differences in Banking Financial Performance in Indonesia Before and After The Covid-19 Pandemic. *Journal of Applied Managerial Accounting*, 6(2), 279–290. <https://doi.org/10.30871/jama.v6i2.4486>
- Kurniasari, R., & Zunaidi, A. (2022). Analysis of The Effect of Capital Adequacy Ratio (CAR) on Return on Assets (ROA). *Proceedings of Islamic Economics, Business, and Philanthropy*, 1(2), 708–742.
- Kusnanto, A. (2018). Risk Profile, Good Corporate Governance, Earning, Capital (RGEC) Method as an Instrument for Measuring The Health Level of Islamic

- Banking in Indonesia. *Jurnal Administrasi Bisnis (JAB)*, 6(2), 124–136. <https://doi.org/10.14710/jab.v6i2.16614>
- Kusumawardani, A. (2022). Analysis of Changes in Profitability Ratios Before and During The Covid-19 Pandemic and Their Relationship to Profit Growth. *Journal of Business and Economics Research (JBE)*, 3(2), 209–214. <https://doi.org/10.47065/jbe.v3i2.1745>
- Latifa, H., & Zuhri, M. (2022). Implications of Third Party Funds, Credit, and Non-Performing Loans on Bank IV's Profitability. *Jurnal Manajemen Dan Perbankan (JUMPA)*, 9(1), 1–17. <https://doi.org/10.55963/jumpa.v9i1.418>
- Laurensia, L., Lindrawati, L., & Susanto, A. (2024). Sustainability Report, Institutional Ownership, and Foreign Ownership on Financial Performance with Board of Commissioners as Moderating. *Jurnal Ilmiah Manajemen Dan Bisnis*, 9(1), 108–117. <https://journal.undiknas.ac.id/index.php/manajemen/article/view/5987>
- Maramis, P. A. (2019). Analysis of Bank Health Level Analysis Using The RGEC Method (Risk Profile, Good Corporate Governance, Earnings, Capital) at PT. Bank Mandiri (Persero) in The 2015-2018 Period. *Jurnal Pembangunan Ekonomi Dan Keuangan Daerah*, 20(4), 40–69. <https://ejournal.unsrat.ac.id/v2/index.php/jpekd/article/view/32805>
- Mayasari, M., Soegianto, E., & Kulsum, U. (2022). Comparative Analysis of Profit Growth Before and During the Covid-19 Pandemic at Commercial Banks Listed on The Indonesia Stock Exchange. *JMA : Jurnal Manajemen Dan Akuntansi*, 11(1), 1–6. <http://ejournal.untag-smd.ac.id/index.php/JMA/article/view/6152>
- Muhammad, R., & Nawawi, M. (2022). Financial Performance of Islamic Banks in Indonesia Before and During The Covid-19 Pandemic. *El-Mal: Jurnal Kajian Ekonomi & Bisnis Islam*, 3(5), 854–867. <https://doi.org/10.47467/elmal.v3i5.1133>
- Ningsih, L. (2023). *With The Pandemic Over, The Performance of Healthcare Sector Issuers has Returned to Normal*. *Warta Ekonomi*. <https://wartaekonomi.co.id/read503281/pandemi-berakhir-kinerja-emiten-sektor-kesehatan-kembali-normal>
- Nisa, E. C., Rosiyah, N., & Octavia, R. T. (2024). Credit Risk Management in Islamic Banking. *Jurnal Pajak Dan Analisis Ekonomi Syariah*, 1(4), 19–24. <https://ejournal.arei.or.id/index.php/JPAES/article/view/670>
- Nurapiah, D. (2019). Operational Risk Management in Islamic Banking in Indonesia. *EKSISBANK: Ekonomi Syariah Dan Bisnis Perbankan*, 3(1), 66–73. <https://doi.org/10.37726/ee.v3i1.14>
- Nursasi, E., Wijaya, C. D. E. W., Hariadi, S., & Andiani, L. (2024). Analysis of Bank Health in Indonesia Based on Risk Based Bank Rating During and After The COVID-19 Pandemic. *Inspirasi Ekonomi : Jurnal Ekonomi Manajemen*, 6(2), 158–167. <https://doi.org/10.32938/ie.v6i2.6773>
- PERBANAS. (2024). *Indonesian Banking Performance - November 2023*. Perbanas.Org.
- Pratikto, M. I. S., & Rahmawati, N. N. (2021). Analysis of The Soundness Level of Financial Reports at PT Bank Syariah Mandiri Tbk. Using The CAMEL Method for The 2016-2020 Period. *OECONOMICUS Journal of Economics*, 6(1), 29–37. <https://doi.org/10.15642/oje.2021.6.1.29-37>
- Pulungan, M. A., & Adiwibowo, A. S. (2022). The Influence of Good Corporate

- Governance on Banking Financial Performance During The Pandemic (Empirical Study on Banking Companies Listed on The IDX in 2020-2021). *Diponegoro Journal of Accounting*, 4(11), 1–11. <https://ejournal3.undip.ac.id/index.php/accounting/article/view/36363/27965>
- Rahayu, A. S., Indrawan, A., & Sudarma, A. (2021). The Influence of Third Party Fund Growth (TPF) and Capital Adequacy Ratio on Return on Assets. *Balance : Jurnal Akuntansi Dan Bisnis*, 6(2), 122–131. <https://doi.org/10.32502/jab.v6i2.3871>
- Rahmat, R., & Ruchiyat, E. (2021). Analysis of Capital Ratio, Operational Efficiency, Net Interest, Liquidity, and Non-Performing Loans, Against Profit Ratio. *Coopetition : Jurnal Ilmiah Manajemen*, 12(3), 413–430. <https://doi.org/10.32670/coopetition.v12i3.751>
- Raihan, M. F., & Ramadhan, Z. (2023). Analysis of bank health levels using The RGEC method at Regional Development Banks. *Jurnal Manajemen & Bisnis Digital*, 2(1), 62–77.
- Ruslan, A. (2020). Analysis of The Asset Quality Analysis of The Indonesian Banking System in 2000-2011. *Al-Iqtishad: Jurnal Ekonomi Syariah*, 12(2), 141–155. <https://jurnal.iain-bone.ac.id/index.php/aliqtishad/article/view/1753>
- Saputra, R., Soleh, A., & Febliansa, M. R. (2024). Analysis of Bank Health Level With RGEC Method (Risk Profile, Good Corporate Governance, Earnings, and Capital) on PT. Bank Bengkulu. *Jurnal Akuntansi, Manajemen Dan Bisnis Digital*, 3(2), 159–166. <https://doi.org/10.37676/jambd.v3i2.5927>
- Sari, I. P., & Wijaya, E. (2024). Comparative Analysis of Camel's Performance at BCA Syariah Bank Before and During The COVID-19 Pandemic. *Journal of Accounting, Management and Islamic Economics*, 2(1), 267–278. <https://doi.org/10.35384/jamie.v2i1.540>
- Sitanggang, L. L. M. S., & Hidayat, K. (2020). *This is Why Bank Deposits Grow Higher Than Credit*. Kontan.Co.Id. <https://keuangan.kontan.co.id/news/ini-penyebab-dpk-bank-tumbuh-lebih-tinggi-dari-kredit>
- Sodik, F., Antika, R., Hidayat, A., Sulis Setyaningsih, T., & Ayuni, E. (2023). Comparative Analysis of The Health Level of Islamic Banks Using The RGEC Method. *JURNAL AKUNIDA*, 9(1), 47–60. <https://doi.org/10.30997/jakd.v9i1.7733>
- Statistics Indonesia. (2023). *Indonesia's Quarterly Gross Domestic Product 2019-2023*. <https://www.bps.go.id/id/publication/2023/10/13/9f14d43dc0c01b6d1883fb7c/prod-uk-domestik-bruto-indonesia-triwulanan-2019-2023.html>
- Sullivan, V. S., & Widoatmodjo, S. (2021). Bank Financial Performance Before And During The Pandemic (Covid – 19). *Jurnal Manajerial Dan Kewirausahaan*, 3(1), 257–266. <https://doi.org/10.24912/jmk.v3i1.11319>
- Sunaryo, D., Kurnia, D., Adiyanto, Y., & Quraysin, I. (2021). The Influence of Credit Risk, Liquidity Risk, and Operational Risk on Banking Profitability in Commercial Banks in Southeast Asia in The 2012-2018 Period. *Jurnal Ilmu Keuangan Dan Perbankan (JIKA)*, 11(1), 62–79. <https://doi.org/10.34010/jika.v11i1.3731>
- Suripto, S., Prasetya, V., & Cahyaningati, R. (2022). Comparisonal Analysis of Health Level Conventional Bank in Indonesia before and During The Covid-19 Pandemic with Using The RGEC Method. *Assets : Jurnal Ilmiah Ilmu Akuntansi, Keuangan Dan Pajak*, 6(1), 16–32. <https://doi.org/10.30741/assets.v6i1.837>

- Tiono, I., & Djaddang, S. (2021). Comparative Analysis of Financial Performance of Conventional Banks in Book IV in Indonesia Before and After The COVID-19 Pandemic. *BALANCE: Jurnal Akuntansi, Auditing Dan Keuangan*, 18(1), 72–90. <https://doi.org/10.25170/balance.v18i1.2336>
- Utami, U., & Silaen, U. (2018). Analysis of The Influence of Credit Risk and Operational Risk on Bank Profitability. *Jurnal Ilmiah Manajemen Kesatuan*, 6(3), 123–130. <https://doi.org/10.37641/jimkes.v6i3.293>
- Wahyudin, S., & Sulfitri, V. (2024). Analysis of The Health Level of Banks Listed on The Indonesia Stock Exchange During The COVID-19 Period and During The COVID-19 Transition Period. *Jurnal Ekonomi Trisakti*, 4(1), 351–360. <https://doi.org/10.25105/jet.v4i1.18291>
- Yolanda, T., Herman, L. A., & Handayani, D. (2024). Analysis of Bank Health Levels Using The RGEC Method at Regional Development Banks in The Sumatra Region 2017-2022. *Jurnal Ilmiah Raflesia Akuntansi*, 10(1), 74–88.
- Yulianti, N., Purwanto, K., & Ermawati, E. (2024). Analysis of Bank Health Assessment Using The RGEC Method (Risk Profile, Good Corporate Governance, Earning, Capital) in Private Banks Listed on The Indonesia Stock Exchange in 2020-2023. *JPIM (Jurnal Penelitian Ilmu Manajemen)*, 9(3), 374–384. <https://jurnalekonomi.unisla.ac.id/index.php/jpim/article/view/2261>