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# Comparison of Bank Soundness Levels Using the Risk-Based Bank Rating Method Before and During the Covid-19 Pandemic

Ni Made Wira Dwi Ratna Pradnyani and Luh Gede Sri Artini

## ABSTRACT

**The financial system plays a very important role in achieving sustainable growth rates. Banks with their financial performance are the main role in a country's financial system. This study aims to determine differences in bank soundness level using the Risk-Based Bank Rating method in the aspects of Risk Profile, Good Corporate Governance, Earnings, and Capital before and during the Covid-19 pandemic. This research is conducted at commercial banks in Indonesia with a total sample of 84 banks registered at OJK. The data analysis technique used is the Wilcoxon Signed Rank Test. The results show that the aspects of Risk Profile which are measured using LDR, Earnings which are measured using ROA and NIM, and Capital which is proxied by CAR there are significant differences during the Covid-19 pandemic. The results also show that there was no significant difference in the Risk Profile aspect as measured using the NPL and Good Corporate Governance aspects during the Covid-19 pandemic. From a bank's soundness level point of view, commercial banks are still in a safe position even though their ROA and NIM have experienced downgrades due to the ineffective performance of banks during the pandemic. Credit restructuring and the ineffectiveness of bank lending were the main reasons for the ineffectiveness of bank performance during the pandemic.**

**Keywords:** Capital, Earnings, Good Corporate Governance, Risk Profile.

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**N. M. W. D. R. Pradnyani ***
Faculty of Economics and Business, Udayana University, Indonesia
(email: wiraratna200128@gmail.com)
**L. G. S. Artini**
Faculty of Economics and Business, Udayana University, Indonesia
(email: lg_artini@unud.ac.id)

***Corresponding Author***

## I. Introduction

A healthy financial system in the economy is the backbone of the country. The financial system plays a very important role in achieving sustainable growth rates. Banks with achieved financial performance play a major role in a country's financial system. Bank financial performance is a picture of a bank's financial condition in a period related to channeling and fundraising activities. The bank's financial performance is an important aspect of measuring the soundness of a bank in a certain period. Bank soundness measurement is carried out because banks are institutions that can pose systemic risks to a country. Systemic risk is the cause of failure of one or several financial institutions as a result of a systemic event. This risk can cause a shock to an institution. This risk can also cause a shock to one institution and then spread, or even simultaneously affect most financial institutions (Gupta, 2020)

Positive information regarding bank performance is very important in the development of a country's economic growth (Hassan, 2021). This information will then be used by bank stakeholders, such as the bank itself, investors, the government, and customers as a basis for making decisions. Therefore, banks need to maintain the stability of their business so that they remain stable or increase. Assessment of soundness and financial performance for the bank itself is used as material for evaluating its success in carrying out company management.

This assessment can be used as a basis for policymaking in the next period. Investors use the performance and soundness of the bank as material for observing and assessing the return on investment that will be obtained. Shareholders need to assess which bank they consider suitable to invest in financially (Maheshwari & Banerjee, 2019). The government uses bank performance and soundness as an aspect to assess the feasibility of a bank as a financial institution. The customer observes the performance and soundness of the bank as the basis for a decision to believe or not to deposit or borrow funds at the relevant bank.

Bank is a very important business entity for a country and concerns the livelihood of the people in a country *(Devie et al.*, 2020). These business entities can help the government by increasing capital, expanding industrial prosperity, and directing opportunities (Hassan, 2021). Banks are referred to as regulated firms, namely companies that are regulated very strictly by the government. Implementation of bank activities must comply with applicable standards, both national and global standards. Bank standards are regulated specifically by an organization called the Bank for International Settlements (BIS). BIS is an organization owned by the central banks of 63 countries in the world based in Basel, Switzerland. BIS function as a bank of its member central banks whose role is to promote monetary stability, international finance, and financial institutions in the world.

The Basel Committee on Banking Supervision (BCBS) is one of the committees within the BIS. BCBS has the role of being a cooperative forum related to banking supervision and setting banking regulatory standards. These standards are known as the Basel Standards. The Basel standard has been set three times to date. Basel I was motivated by fears of the Latin American debt crisis in the early 1980s. Basel II was motivated by changes that occurred in the banking industry and financial markets, such as those that occurred in South and Southeast Asia in 1997-1998. Basel III was motivated by the global financial crisis in 2007-2009. Basel III is a regulatory reform in the banking sector as a response to the financial crisis that occurred in 2008 which was caused by high variations in RWA between banks, lack of capital adequacy, liquidity crisis, and very high leverage (Wanuri *et al.*, 2022).

The Government of Indonesia issued various regulations relating to the stability of the banking sector to adopt this Basel Standard to the banking sector in Indonesia. One of them is the assessment of the soundness of the bank. Assessment of bank soundness is the result of regulatory and supervisory aspects that show the performance of national banking. Based on Bank Indonesia regulation No 13/1/PBI/2011, the risk-based bank rating method, namely Risk-Based Bank Rating (RBBR), is an assessment of the soundness level of a bank that previously used the CAMELS (Capital, Assets, Management, Earnings, Liquidity) method, and Sensitivity to Market Risk). RBBR is used to measure the soundness of a bank from a risk perspective because banks are considered the most vulnerable institution to risk (Wanuri *et al.*, 2022). Bank Indonesia Regulation No. 13/1/PBI/2011 Chapter III concerning the Mechanism of Individual Bank Soundness Assessment explains that banks are required to conduct soundness assessments using a risk approach or Risk-Based Bank Rating (RBBR), with the scope of the assessment; Risk Profile, Good Corporate Governance (GCG), Earnings, and Capital. These four aspects are abbreviated as RGEC (Wanuri *et al.*, 2022)

Assessment of bank soundness using the RBBR method examines different assessments. The risk profile is an assessment of inherent risk and the quality of risk management implementation in bank operations. GCG is a bank governance that applies the principles of transparency, accountability, responsibility, independence, and fairness. Earnings is a tool used to analyze the level of business efficiency and profitability achieved by banks (Candera & Indah, 2020).

Regulations regarding banking are made as prevention and evaluation so that monetary stability in the hands of banks will always be stable. Even so, it is unavoidable that many factors can disrupt a bank's financial performance, both internal and external factors. External factors are factors that cannot be controlled by banks, one of which is the Covid-19 pandemic. This pandemic is a factor that has a significant impact on the stability of the banking economy in Indonesia (Putri *et al.*, 2021).

Many companies are forced to lay off employees or lay off their employees until they have to close their businesses, to minimize human mobility. The layoff policy also occurred because many companies suffered losses due to the loss of consumers. After all, people's purchasing power decreased. This sequence of events then led to a decrease in people's income. The decline in people's income has an impact on increasing problem financing in banks (Asmirawati & Kurniati, 2021). The ability of banks to collect deposits from the public has also decreased (Candera & Indah, 2020)

This phenomenon can then directly increase credit risk and bank liquidity risk. Liquidity risk occurs when customers demand massive withdrawals from their deposits which ultimately have a negative impact on bank profitability. Credit risk itself is one of the bigger concerns for the banking industry because credit risk is a category of risk that leads to bank failure (Raj & Raj, 2017). When a customer experiences a decrease in income, the credit that is the responsibility of the related customer will be in trouble, which can pose a credit risk to the bank.

In general, the ability of conventional commercial banks to generate profit or profitability has decreased during the pandemic as measured by ROA (Return on Assets) and NIM (Net Interest Margin). Liquidity or the ability of conventional commercial banks to meet short-term obligations has also decreased as measured by the LDR (Loan to Deposits Ratio). An increase in the capital adequacy ratio during this pandemic may indicate that banks are trying to anticipate a decrease in CAR by increasing capital (Juniasti, 2022).

Candera and Indah (2020) found an increase in the ratio of NPL (Non-Performing Loans) for the risk profile during the pandemic at conventional banks in Indonesia. The same study found no significant difference in ROA for earnings before and during the pandemic at conventional banks in Indonesia. This research also found a decrease in the ratio of CAR to capital during the pandemic at conventional banks in Indonesia.

Asmirawati and Kurniati (2021) found that there was an increase in CAR, a decrease in the ratio of NPF (Non-Performing Financing) and FDR (Financing to Deposit Ratio), and there was no difference in the ratio of BOPO (Operating Expenses and Operating Income) and ROA for commercial banks sharia during a pandemic. Furthermore, in the Sharia business unit, it was found that there was an increase in the NPF ratio, a decrease in the BOPO ratio, and no difference in the ROA and FDR ratios during the pandemic.

Nurdiansari *et al.* (2021) found that Bank Rakyat Indonesia's cash ratio, LDR, primary ratio, CAR, ROA, and ROE (Return on Equity) decreased during the pandemic. Juniasti (2022) explains that there was a significant decrease in ROA, a significant increase in CAR and BOPO, and no significant difference in NPL, LDR, and CR (cash ratio) at rural credit banks (BPR) in Indonesia. Widyanto (2022) found that there was a decrease in the CAR, gross NPL, net NPL, and BOPO ratios during the pandemic at PT Bank Central Asia Tbk. On the other hand, the same research found an increase in ROA, ROE, NIM, and LDR during a pandemic at PT Bank Central Asia Tbk.

Tiono and Djaddang (2021) stated that “there was no significant difference in the CAR ratio, there was an increase in the NPL and BOPO ratios, and there was a decrease in the ROA, ROE, and LDR ratios during the pandemic. Sullivan and Widoatmodjo (2021) found an increase in CAR, NPL, and BOPO ratios during the pandemic, and there was no significant difference in the LDR and ROE ratios between before and during the pandemic. Research on the comparison of the financial performance of financial sector companies before and during the pandemic was conducted (Kusuma & Widiarto, 2022). The research found that there were differences in the ROA ratio which tended to decrease in companies in the financial sector during the pandemic and there were no significant differences in the current ratios of companies in the financial sector before and during the pandemic."

Bank performance results with a risk profile calculated using NPL by Candera and Indah (2020) and Sullivan and Widoatmodjo (2021), as well as NPF in sharia business units by Asmirawati and Kurniati (2021) illustrate a decline during the 2020 pandemic. However, the NPL calculation results by Widyanto (2022) and NPF in Islamic commercial banks by Asmirawati and Kurniati (2021) explained that there was an increase during the 2020 pandemic. Juniasti (2022) obtained insignificant NPL calculation results during the 2020 pandemic. The risk profile measured using LDR by Widyanto (2022) was found to have increased during the pandemic. However, Tiono and Djaddang (2021) found a decrease in LDR during the pandemic. The difference in results is found in the research by Juniasti (2022) and Sullivan and Widoatmodjo (2021) who found no significant difference in LDR before and during the pandemic.

The results of assessing bank performance with earnings calculated using ROA have decreased based on the results of research by Putri *et al.* (2021), Nurdiansari *et al.* (2021), Juniasti (2022), Tiono and Djaddang (2021) and Kusuma and Widiarto (2022). Different results were found in research from Widyanto (2022) who found that there was an increase in ROA during the pandemic. However, Candera and Indah (2020) found no significant difference between ROA before and during the pandemic.

The results of assessing bank performance with earnings calculated using ROE have decreased during the pandemic based on the results of research by Nurdiansari *et al.* (2021) and Tiono and Djaddang (2021). Different findings were obtained from the results of research conducted by Widyanto (2022) who found that ROE had increased and Sullivan and Widoatmodjo (2021) found no significant difference in ROE during the pandemic. An assessment of bank performance with earnings using the NIM ratio was carried out by Widyanto (2022) and found an increase during the pandemic. Assessment of bank performance with earnings using the BOPO ratio has increased according to research results from Tiono and Djaddang (2021), Sullivan and Widoatmodjo (2021), and Juniasti (2022).

The results of research on bank performance with capital calculated using the CAR ratio show an increase during the pandemic based on research results by Asmirawati and Kurniati (2021) on Islamic commercial banks (Juniasti, 2022; Sullivan & Widoatmodjo, 2021). On the other hand, Candera & Indah (2020), Nurdiansari *et al.* (2021), and Widyanto (2022) found a decrease in the CAR ratio during the pandemic. Then, Tiono and Djaddang (2021) found no significant difference in the CAR ratio during the pandemic.

The research period used is the 2017-2020 period. The selection of variables in this study is based on previous research. The variables used in this study are LDR and NPL for risk profile, GCG (Good Corporate Governance) variables for GCG aspects, ROA and NIM for earnings, and CAR variables for capital. Conventional commercial banks were chosen as research subjects. Conventional commercial banks were chosen because conventional commercial banks carry out their main activities with an interest system. The sluggish economy during the pandemic caused interest rates to be adjusted by Bank Indonesia so that conventional commercial banks became institutions that felt a huge impact.

This research is different from most previous studies because this research assesses banks from a soundness point of view, not only financial performance. This study also uses the latest regulations regarding bank soundness assessment using the Risk-Based Bank Rating (RBBR) method which is calculated using the aspects of risk profile, governance, earnings, and capital (RGEC). The main reason for choosing this variable in this study is that apart from being based on the results of previous empirical studies, the variable chosen is a variable that is recommended by Bank Indonesia to measure the soundness of conventional commercial banks as stated in Bank Indonesia Circular Letter No.13/24/DPNP/2011.

### A. *Hypotheses*

H1: There are differences in the risk profile aspects of conventional commercial banks in Indonesia before and during the Covid-19 pandemic based on NPL.

H2: There are differences in the risk profile aspects of conventional commercial banks in Indonesia before and during the Covid-19 pandemic based on LDR.

H3: There were differences in the Good Corporate Governance aspects of conventional commercial banks before and during the Covid-19 pandemic.

H4: There were differences in the earnings aspect of conventional commercial banks in Indonesia before and during the Covid-19 pandemic based on ROA.

H5: There were differences in the earnings aspect of conventional commercial banks in Indonesia before and during the Covid-19 pandemic based on NIM.

H6: There were differences in the capital aspects of conventional commercial banks in Indonesia before and during the Covid-19 pandemic.

## II. Research Method

The design of this study is a comparative study on the soundness level of conventional commercial banks using the risk-based bank rating method before and during the Covid-19 pandemic for the 2017-2020 period. Aspects of bank soundness that will be measured are the risk profile which is proxied by non-performing loans (NPL) and loan-to-deposit ratio (LDR), the GCG aspect which is measured by assessing the quality of bank management and the five GCG principles, earnings which are proxied by return on assets (ROA), and net interest margin (NIM, as well as capital proxied by the capital adequacy ratio (CAR).

Until 2020 there were 148 conventional commercial banks registered with the Financial Services Authority which were divided into 4 categories, namely: state-owned banks, regional government banks, national private banks, and branch offices of banks domiciled abroad. This research uses nonpurposive sampling method. The criteria stipulated in the sample selection, namely conventional commercial banks that have been operating and registered with the Financial Services Authority in the range of 2017 to 2020 and are not being suspended by Bank Indonesia and the Financial Services Authority while conducting observations; have published annual financial reports from 2017 to 2020 on the Financial Services Authority's website and use Indonesian in their reports; and conventional commercial banks that have published annual reports and corporate governance reports on the bank's website in the 2017-2020 period. 84 banks meet the criteria as a sample. The data collection method in this study was the non-participant observation method. Data analysis techniques using the Paired T-Test, Wilcoxon Signed Rank Test.

## III. Results and Discussion

### *A. Differences in Risk Profile Aspects of Conventional Commercial Banks Before and During the Covid-19 Pandemic*

"NPL of conventional commercial banks has a significance value of 0.220 > 0.05. This result then stipulates that H1 is rejected and shows that there is no significant difference in the NPL of conventional commercial banks in Indonesia before and during the Covid-19 pandemic for the 2017-2020 period. The LDR of conventional commercial banks shows a significance value (Asymp. Sig (2-tailed)) of 0.000 < 0.05. This result then determines that H2 is accepted and shows that there were significant differences in the LDR of conventional commercial banks in Indonesia before and during the Covid-19 pandemic for the 2017-2020 period."

Based on hypothesis testing using the Wilcoxon Signed Rank Test NPL and LDR at conventional commercial banks before and during the 2017-2020 pandemic, it can be stated that H1 is rejected and H2 is accepted. These results prove that there is no significant difference in the Risk Profile aspect which is proxied by the NPL of conventional commercial banks in Indonesia before and during the Covid-19 pandemic for the 2017-2020 period. These results also prove that there are significant differences in the aspect of the Risk Profile which is proxied by the LDR of conventional commercial banks in Indonesia before and during the Covid-19 pandemic for the 2017-2020 period.

The Covid-19 pandemic has not had such a significant effect on bank credit risk as measured using NPL. The phenomenon of the Covid-19 pandemic is experiencing a long process so during this process banks have the opportunity to determine strategies. The Financial Services Authority also stipulates that banks carry out credit restructuring on loans that tend to experience problems. In addition, the bank also has reserves for impairment losses that can be used to control the value of NPLs. These two strategies were carried out by the bank as an effort to control the credit risk experienced during the Covid-19 pandemic, so that the Covid-19 pandemic did not have a significant impact on conventional commercial banking in Indonesia.

The Covid-19 pandemic has had a significant impact on bank liquidity risk as measured using LDR. During the Covid-19 pandemic, the LDR of conventional commercial banks in Indonesia has decreased. During the Covid-19 pandemic, banks experienced an increase in liquidity risk by decreasing the LDR value.

The credit restructuring policy stipulated by the bank causes the liquid assets received by the bank from the borrower to experience differences from the term of payment to the amount paid. During the pandemic, banks also did not distribute credit effectively, which resulted in large discrepancies with third-party funds received by banks. Third-party funds that are not effectively channeled into credit will be unemployed and become idle funds. This will cause the bank's opportunity to gain profits to decrease.

### *B. Differences in Good Corporate Governance Aspects of Conventional Commercial Banks Before and During the Covid-19 Pandemic*

Conventional commercial bank GCG shows a significance value (Asymp. Sig (2-tailed)) of 0.850 which is greater than the significance level of 0.05. This result then determines that H3 is rejected. Testing this hypothesis shows that there are no significant differences in the Good Corporate Governance aspects of conventional commercial banks in Indonesia before and during the Covid-19 pandemic for the 2017-2020 period. 17 GCG data during the Covid-19 pandemic had increased compared to before the Covid-19 pandemic. Ties or the similarity of GCG data before and during the Covid-19 pandemic is 52, which means 52 GCG data have the same value. There was no significant difference between GCG before the Covid-19 pandemic and GCG during the 2017-2020 Covid-19 pandemic. The Covid-19 pandemic has not had a significant effect on the Good Corporate Governance of conventional commercial banks in Indonesia. During the Covid-19 pandemic, the GCG of conventional commercial banks in Indonesia did not experience significant changes.

### *C. Differences in Aspects of Conventional Commercial Bank Earnings Before and During the Covid-19 Pandemic*

"ROA for conventional commercial banks shows a significance value (Asymp. Sig (2-tailed)) of 0.000 < 0.05. These results then establish that H4 is accepted and show that there were significant differences in the ROA of conventional commercial banks in Indonesia before and during the Covid-19 pandemic for the 2017-2020 period. Conventional commercial bank NIM shows a significance value (Asymp. Sig (2-tailed)) of 0.000 < 0.05. This result then establishes that H5 is accepted and shows that there were significant differences in the NIM of conventional commercial banks in Indonesia before and during the Covid-19 pandemic for the 2017-2020 period".

Based on hypothesis testing using the Wilcoxon Signed Rank Test ROA and NIM at conventional commercial banks before and during the 2017-2020 pandemic, it can be stated that H4 and H5 are accepted. This proves that there is a significant difference in the Earnings aspect which is proxied by the ROA and NIM of conventional commercial banks in Indonesia before and during the Covid-19 pandemic for the 2017-2020 period.

During the Covid-19 pandemic, the ROA of conventional commercial banks in Indonesia has decreased. The decrease in ROA during the pandemic can be caused by banks not being able to manage their assets properly to make a profit during the pandemic. In connection with the increase in liquidity risk which has reduced the chances of banks earning profits, conventional commercial banks' ROA during the pandemic has also decreased.

The ineffectiveness of credit distribution and credit restructuring policies during the pandemic caused the profits that banks earned were not maximized during the pandemic.

During the Covid-19 pandemic, the NIM of conventional commercial banks in Indonesia has decreased. Income from channeling funds or credit by conventional commercial banks is in the form of interest income. During the Covid-19 pandemic, these fund distribution activities could not be carried out effectively by banks, so the interest income received also decreased. Credit restructuring by lowering interest rates also caused interest income to decline. It was this significant decline in interest income that caused NIM to experience a significant decline.

### *D. Differences in Capital Aspects of Conventional Commercial Banks Before and During the Covid-19 Pandemic*

The CAR of conventional commercial banks shows a significance value (Asymp. Sig (2-tailed)) of 0.012 which is smaller than the significance level of 0.05. This result then determines that H6 is accepted. Testing this hypothesis shows that there were significant differences in the capital aspects of conventional commercial banks in Indonesia before and during the Covid-19 pandemic for the 2017-2020 period.

The Covid-19 pandemic has had a significant impact on bank capital as measured using CAR. During the Covid-19 pandemic, the CAR of conventional commercial banks in Indonesia has increased. An increase in CAR can occur because conventional commercial banks have increased their capital adequacy during the pandemic as a measure to anticipate the effects of the pandemic. Increasing capital adequacy is also carried out to cover the risk of losses that will be experienced. Moreover, coupled with the credit restructuring policy and the ineffective distribution of funds, the risks experienced are increasing. This policy of increasing capital adequacy has made the CAR value during the pandemic increase.

## IV. Conclusion

Credit risk as measured using NPL is not affected by the presence of the Covid-19 pandemic. Liquidity risk as measured using LDR is affected by the presence of the Covid-19 pandemic. GCG is not affected by the Covid-19 pandemic. Profitability as measured using ROA is affected by the Covid-19 pandemic. Soundness of conventional commercial banks based on ROA has decreased during the pandemic, although it is still in a controlled position. Bank soundness during the pandemic based on ROA has also decreased due to ineffective bank performance. Profitability as measured using NIM is affected by the Covid-19 pandemic. Soundness of conventional commercial banks based on NIM has decreased during the pandemic, although it is still in a controlled position. Bank soundness during the pandemic based on NIM also experienced a decline due to ineffective bank performance. CAR is affected by the Covid-19 pandemic.

Customers, prospective customers, and investors should be able to assess the performance and soundness of a bank in phenomena that resemble a future pandemic and use performance during a pandemic as evaluation material. This will assist customers, potential customers, and investors in evaluating how banks respond to phenomena such as this pandemic and assist in making decisions to save and invest funds. Banking is expected to pay attention to which financial aspects are affected by this pandemic and be able to establish a stronger strategy to deal with post-pandemic and similar phenomena in the future.

## References

Asmirawati, & Kurniati, M. (2021). Analisis Perbandingan Kinerja Keuangan BUS dan UUS Antara Sebelum dan Selama Pandemi Covid-19. *Jurnal REKSA: Rekayasa Keuangan, Syariah, Dan Audit*, *8*(1), 87–99.

Candera, M., & Indah, K. D. (2020). Financial Performance Islamic Banking: A Comparative Analysis Before and During the Covid-19 Pandemic in Indonesia. *International Journal of Business*, *1*(1), 2746–1351.

Devie, D., Liman, L. P., Tarigan, J., & Jie, F. (2020). Corporate Social Responsibility, Financial Performance and Risk in Indonesian Natural Resources Industry. *Social Responsibility Journal*, *16*(1), 73–90. https://doi.org/https://doi.org/10.1108/SRJ-06-2018-0155.

Gupta, S. (2020). A Study of Financial Performance Determinants of US Federal Bank. *International Journal of Management (IJM)*, *11*(11), 172–181. https://doi.org/https://doi.org/10.34218/IJM.11.11.2020.017.

Hassan, S. (2021). Comparative Analysis on Financial Performance of Selected Commercial Banks: A Study on Bangladesh Banking Sector. *International Journal of Business and Technopreneurship*, *11*(1), 91–102.

Juniasti, R. (2022). Analysis of the Financial Performance of National Rural Banks (BPR) before and during Covid-19 pandemic. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*, *5*(1), 7135–7146. https://doi.org/https://doi.org/10.33258/birci.v5i1.4444

Kusuma, S. Y., & Widiarto, A. (2022). Analisis Perbedaan Kinerja Keuangan Perusahaan Sektor Keuangan yang Tercatat di BEI Sebelum dan Selama Pandemi Covid-19. *Yudishtira Journal: Indonesian Journal of Finance and Strategy Inside*, *2*(1), 30–42. https://doi.org/https://doi.org/10.53363/yud.v2i1.21.

Maheshwari, R., & Banerjee, R. (2019). A Financial Performance Analysis of Indian Commercial Banks (A Case Study of Indian Private Sector Banks). *International Journal of Research in Engineering, IT and Social Sciences*, *9*(4), 199–205.

Nurdiansari, R., Heliani, Susilawati, E., Sriwahyuni, A., & Paulina, E. (2021). Analysis of Financial Performance Before and During the Covid-19 Pandemic Era at PT. Bank Rakyat Indonesia (BRI) TBK. *Economics, Management, and Accounting*, *1*(1), 129–137. https://doi.org/https://doi.org/10.11594/nstp.2021.1015.

Putri, N. N., Dwiputri, M., Wulan, N., & Hermawan, I. (2021). Analysis Before and After the Covid-19 Pandemic on Profitability in Bank. *International Journal of Economics, Management, and Accounting (IJEMAC)*, *1*(1), 36–41.

Raj, B., & Raj, S. (2017). A Comparative Analysis Among Indian Commercial Banks (Public & Private) and a Foreign Bank Using Var (Value-At-Risk) Model. *European Journal of Business and Management*, *9*(31), 1–10.

Sullivan, V. S., & Widoatmodjo, S. (2021). Kinerja Keuangan Bank Sebelum dan Selama Pandemi (Covid-19). *Jurnal Manajerial Dan Kewirausahaan*, *3*(1), 257–266.

Tiono, I., & Djaddang, S. (2021). Analisis Komparasi Kinerja Keuangan Pada Perbankan Konvensional Buku IV di Indonesia Sebelum dan Sesudah Pandemi Covid-19. *BALANCE: Jurnal Akuntansi, Auditing Dan Keuangan*, *19*(18), 72–90. https://doi.org/https://doi.org/10.25170/balance.v18i1.

Wanuri, Fauziyanti, W., & Sari, C. T. (2022). Analysis of the Health Level of the State Saving Bank Tbk wiith The RGEC Method Approach (Risk Profile, Good Corporate Governance, Earning, Capital). *International Journal of Economics, Business and Accounting Research (IJEBAR)*, *6*(3), 1485–1494.

Widyanto, M. L. (2022). Comparative Analysis of PT Bank Central Asia Tbk Performance before and after the COVID 19 Pandemic. *East African Scholars Journal of Economics, Business and Management*, *5*(1), 16–21. https://doi.org/https://doi.org/10.36349/easjebm.2022.v05i01.003.