The Effect of Net Interest Margin, Capital Adequacy, and Return on Assets at Commercial Banks on Gross Domestic Product in Indonesia Before and After the Covid-19 Pandemic

Achmad Zaki
Universitas Nahdlatul Ulama, Sidoarjo, Indonesia
achmadzaki1992@gmail.com

ABSTRACT

Covid-19 has had an impact on the Indonesian banking industry, slowing the rate of economic growth, one of which is caused by slowing credit growth in the community, resulting in decreased profitability in banks. The goal of this study is to examine bank financial performance before and after the Covid-19 outbreak, as well as to provide alternative techniques for improving Indonesian bank financial performance. The data used in this research is secondary data obtained from annual reports on audited banking from 2018 to 2021, which can be accessed at the IDX website. This study employs multiple regression data analysis to assess performance using three financial ratios: *Net Interest Margin, Capital Adequacy Ratio* and *Return on Assets* to GDP. The findings of this study show that the Net Interest Margin, Capital Adequacy Ratio and Return on Assets variables have a significant positive effect on GDP in the phenomena before and after the Covid-19 pandemic.

Keywords: Net Interest Margin, Capital Adequacy Ratio, Return on Assets, Commercial Bank, Covid-19 Pandemic

INTRODUCTION

The Covid-19 outbreak has had a significant economic impact on several countries worldwide, including Indonesia. The most visible example is when the global stock market fell to its lowest point, which occurred on the Indonesian Stock Exchange as well. The virus has had an impact on the manufacturing industry, small and medium-sized businesses, the financial industry, and individual worker incomes. It is not surprising that many governments have offered economic stimulus to mitigate the impact of the economic crisis (Brodeur et al., 2021). Covid-19's impact appears to be felt in all areas, particularly the stalled economic boom. This is due to the fact that Covid-19 is spreading not only domestically, but also globally. This delay was caused by deteriorating external conditions and a drop in domestic demand, both of which were related to deteriorating corporate and consumer development conditions (Caraka et al., 2020). The Covid-19 epidemic has impacted many business sectors, including the Indonesian banking industry, delaying economic development, reducing credit growth, and decreasing banking profitability. As a result, we should expect a decline in bank financial performance in line with the Covid-19 spread (Elnahass et al., 2021).

This study focuses on commercial banks' financial performance. Commercial banks are non-profit organizations that collect savings from the public and reinvest them in the community as credit to improve people's lives (Maune, 2018). A commercial bank used in this study is Bank BCA, Bank Mandiri, Bank BNI, Bank BRI, Bank Mega, Bank Danamon, Bank Permata, Bank Bumi Arta, Bank Capital Indonesia, Bank OCBC NISP, Bank CIMB Niaga, Bank Victoria Indonesia, Bank PAN Indonesia, Bank QNB Indonesia, and Bank Maybank Indonesia. Banking financial performance can be used to investigate operational activities in the banking industry and determine whether or not everything is going as planned (Caclini, 2022). Furthermore, banking financial performance can be used to analyze banks on a regular basis (Gallo & Historiador, 2022). Financial performance is evaluated by reviewing financial reports. In this case, financial reports must be reviewed so that readers can obtain financial information about banks in a timely manner (Ichsan et al., 2021). To analyze financial reports, financial ratios from financial reports can be used (Restianti & Agustina,

2018). The independent variables in this study are net interest margin, capital adequacy ratio, and return on assets, with GDP as the dependent variable.

According to Bank Indonesia Circular Letter No.6/23/DPNP dated May 31, 2004, net interest margin (NIM) is the ratio of net interest income to average earning assets. The capital adequacy ratio (CAR) is then used to assess bank risk because it demonstrates the amount of capital adequacy used as a risk-reservoir (Supatmin, 2021). Return on Assets (ROA) is a type of profitability measurement used to assess a bank's ability to generate profits through the use of its assets (Choiriyah et al., 2021). GDP is defined as the total value of all goods and services produced by a country in a given period or year, including goods and services produced by companies owned by residents of that country and residents of other countries, according to Russon, Manuel G, and Bansal (2021).

The net interest margin ratio is used to calculate the impact on the gross domestic product (GDP). Looking at the net profit, which continues to rise, this condition indicates that the banking performance is improving. The better the bank's ability to increase profits, the better the bank's ability to carry out its activities. The development of NIM over the last four years has been positive, with the value remaining above 5% from 2018 to 2019, but in 2020 the value of the net interest margin fell below 4.5%, and in 2021 it rose above 4.5%. The fluctuating net interest margin at commercial banks over the last four years was caused by banks' ability to manage their performance optimally, but it was corrected as a result of the impact of the Covid 19 pandemic. The net interest margin over the last four years has the potential to affect GDP. This can be seen in Indonesia's GDP, which is still quite good despite having corrected by 2.07% in 2020 but increasing by 3.69% in 2021. According to this interpretation, net interest margins at banks have a positive influence on GDP in the economy (Coscieme et al., 2020). GDP in Indonesia decreased but quickly improved the following year due to improving banking performance conditions, which were quite good during the covid-19 pandemic.

The capital adequacy ratio is used in this study to track the growth of the gross domestic product (GDP). This is the total amount of bank assets containing ratios (loans, securities, and claims on other banks) financed with their own capital and obtained from sources other than banks (Dao & Nguyen, 2020). Banks' ability to provide funds for the development of bank companies while also accommodating the risk of fund loss due to bank operations (Anggari & Dana, 2020). The capital adequacy ratio (CAR) in commercial banks has improved over the last four years, remaining above 21% from 2018 to 2019. The capital adequacy ratio, on the other hand, continues to improve by 23% in 2020 and will remain above 27% in 2021. Commercial banks' capital adequacy ratio has increased over the last four years as a result of their ability to manage effectively, particularly by identifying, measuring, monitoring, and controlling risks that can affect the amount of bank capital (O Abba et al., 2018). The capital adequacy ratio, which has been positive for the last four years, has the potential to have an impact on GDP. This can be seen in Indonesia's GDP, which is still quite good despite being corrected by 2.07% in 2020 but increasing by 3.69% in 2021. According to this interpretation, the capital adequacy ratio in banking has a positive effect on GDP in the economy (Coscieme et al., 2020). For example, Indonesia's GDP, which fell but quickly recovered the following year, could have been influenced by one of the capital owned by banks, such as the capital adequacy ratio, which was quite high during the Covid-19 pandemic.

The bank's ability to benefit from asset management is demonstrated by the variable return on assets (Rajindra et al., 2021). The bank can claim that the company's financial performance has improved because it is more efficient in managing assets to earn income (Hanoon et al., 2020). Increasing bank profits can have an impact on the economy (Ariwinata, I.P.S., and Badjra, 2021). This condition fluctuated from 2018 to 2021; it can also be seen that it decreased from 2019 to 2020 but increased in 2021. Banking operations as a service company have begun to increase as a result of the Covid-19 pandemic (Siska et al., 2021), and GDP growth will improve in 2021 with an increase in ROA value.

Hypothesis

A bank's net interest margin is used to calculate the ratio of net interest income generated by bank operations such as interest paid to account holders and certificates of deposit. The higher the

bank's NIM, the higher the net profit. This is because banks can optimize their performance to increase profits. As a result, the following hypothesis can be proposed to test the effect of NIM on GDP:

H1: The higher the Net Interest Margin, the higher the GDP.

The capital adequacy ratio can reveal how much of the bank's total assets contain various risk elements (securities, loans, investments, claims on other banks) that can be financed using the bank's own capital or funds obtained from various external sources. The increase in the value of the car will directly increase the gross domestic product. This is due to the fact that banks can optimize the CAR ratio to increase their profits. As a result, the following hypotheses for testing the effect of the capital adequacy ratio on GDP can be proposed:

H2: The higher the capital adequacy ratio, the higher the GDP.

The bank's return on assets can be used to determine which assets the bank owns in order to calculate profit after tax. Bank profits can increase the bank's ROA ratio. An increase in ROA can directly affect GDP. As a result, the following hypothesis can be proposed to test the effect of ROA on GDP:

H3: The higher the asset return, the higher the GDP.

METHODS

In this study, explanatory research was used, which involved testing hypotheses about the relationship between variables. The secondary data in this study comes from banking companies' annual financial reports and annual reports for 2018, 2019, 2020, and 2021. Information obtained from www.idx.co.id.

This study's population corresponds to the target population and includes banking requirements listed on the Indonesia Stock Exchange, as well as audited bank financial statements for the period December 31, 2018 - 2021. There are 15 banks in the research population. Because the observation period is four years, from 2018 to 2021, the research has 60 observations (15 banks multiplied by four years = 60 observations). Table 2 shows the bank companies that were obtained from www.idx.co.id

and accessed between August 1 and 7, 2022, based on the population in this study. This study has a four-year observation period, beginning in 2018 and ending in 2021, so the total number of observations is (15 x 4 = 60). The companies listed below offer data and research samples.

Table 2. Research Sample

No	Company
1	Bank BCA
2	Bank Mandiri
3	Bank BNI
4	Bank BRI
5	Bank Mega
6	Bank Danamon
7	Bank Permata
8	Bank Bumi Arta
9	Bank Capital Indonesia
10	Bank OCBC NISP
11	Bank CIMB Niaga
12	Bank Victoria Indonesia
13	Bank PAN Indonesia
14	Bank QNB Indonesia
15	Maybank Indonesia

The collected data were then analyzed using the SPSS program, which performed multiple linear regression analysis to determine the relationship and influence of net interest margin (NIM), capital adequacy ratio (CAR), and return on assets (ROA) variables on GDP. In this study, the multiple linear regression equation model is as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e.$$

Note:
Y = *Gross domestic product*
β_0 = Konstan
β_{1-3} = Koefisien regresi
X_1 = *Net interest margin*
X_2 = *Capital adequacy ratio*
X_3 = *Return on assets*
e = error

RESULTS

Following analysis, hypothesis testing is performed using the significance value from each variable. As a result, multiple linear regression analysis was used to determine the impact of three independent variables (NIM, CAR, and ROA) on the dependent variable (GDP). The regression analysis

results are shown in Tables 3 and 4 using the SPSS 22.0 for Windows program.

Multiple regression analysis yielded F = 10.421 and a significance value of 0.000 (less than a = 0.05). These results show that the independent variables NIM, CAR, and ROA all have a positive effect on GDP at the same time. Furthermore, because the significance value is less than 5%, the proposed regression model should be tested for goodness of fit. According to data analysis, the model described and realized are compatible.

The partial regression analysis results for each variable, along with the resulting regression equation model. The significance values for the three independent variables NIM, CAR, and ROA were 0.015, 0.041, and 0.041, respectively, and were all less than = 0.05. As a result, each variable has a marginally positive effect on GDP. Furthermore, using Table 4, we can arrange the multiple linear regression equation as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$
$$Y = 2.447 + 0.421 X_1 + 0.056 X_2 + 0.306 X_3 + e$$

Figure 1 depicts the study's conceptual design and the correlation between variables:
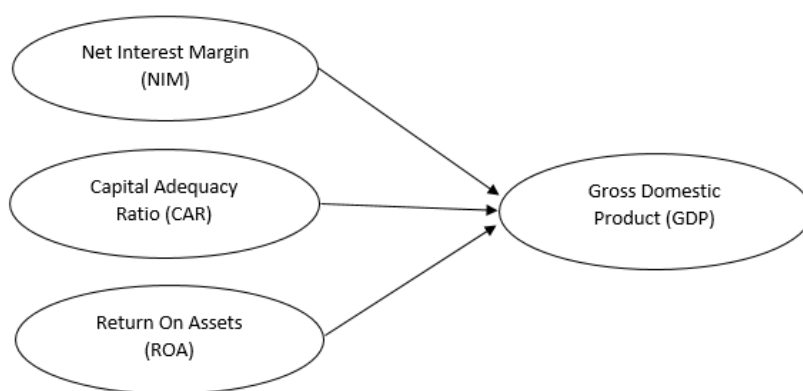

Figure 1. Research Design

Table 3. Anova Test

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	33.814	3	11.271	10.42	.000[b]
1	Residual	60.57	56	1.082		
	Total	94.835	59			

a. Dependent Variable: GDP

b. Predictors: (Constant), NIM, CAR, ROA

Table 3 shows how Net Interest Margin (NIM), Capital Adequacy Ratio (CAR), and Return On Assets (ROA) all affect GDP. It is clear that the variables N Net Interest Margin (NIM), Capital Adequacy Ratio (CAR), and Return On Assets (ROA) can affect Indonesia's GDP before and during Covid-19. Because these ratios are still under control, the Net Interest Margin (NIM), Capital Adequacy Ratio (CAR), and Return On Assets (ROA) conditions prior to the Covid-19 pandemic in 2018 - 2019 appear to be quite good.

Similarly, as we approach 2021 and the Covid-19 pandemic, the variables Net Interest Margin (NIM), Capital Adequacy Ratio (CAR), and Return On Assets (ROA) are improving. In order to maintain system stability, Bank Indonesia issued Bank Indonesia Regulation Number 22/15/PBI/2020, the third amendment to Bank Indonesia Regulation Number 19/3/PBI/2017, concerning Short Term Liquidity Credit for Conventional Commercial Banks. In anticipation of the Corona Virus 2019 (COVID-19) pandemic, the government's and related authorities' financial policies contribute to financial system stability, particularly in the banking sector, and help maintain public confidence. Banks, specifically by providing short-term liquidity loans to conventional commercial banks, and adjustments are required to

overcome the prohibition on short-term liquidity loans. Various Bank Indonesia regulations and policies designed to anticipate the existing financial system and banking ratios as a result of the Covid-19 pandemic can then be used to maintain or encourage better GDP growth in Indonesia.

Table 4 Regression Coefficient and Significance Value of Each Variable

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.45	0.874		3.25	0		
	NIM	0.42	0.105	0.234	2.43	0.02	0.485	1.58
	CAR	0.06	0.027	0.242	2.09	0.04	0.855	1.17
	ROA	0.31	0.146	0.266	2.09	0.04	0.711	1.41

a. Independent Variable: *Gross Domestic Product*

DISCUSSION

Effect of Net Interest Margin on Gross Domestic Product

Uji-t statistics for net interest margin yielded a value of $2,432 with a significance level of 0.05. In conclusion, whether prior to or following the implementation of Covid-19, net interest margin has a significant positive impact on GDP. According to Devitra (2013), increased NIM is a result of increased bank permodalan. Marinkovic and Radovic (2010) argue that increasing net interest margins allows them to be used for credit extension to the general public as well as operational planning. The banking sector's net interest margin has been steadily increasing in tandem with the country's GDP growth. Duy and colleagues (2020).

Net interest margin, according to Kurniadi (2012), is a net interest margin that can be used to measure the distribution of bank interest income and the amount of interest that can be paid to lenders Marviana (2009). The decline in NIM at banks can be attributed to a decrease in banks' ability to obtain net profits, an increase in commercial banks' non-performing loans, and an increase in the volume of public loans. A decrease in net interest margin (NIM) in banks can lead to a decrease in banking company performance, which can have an impact on GDP.

The Impact of the Capital Adequacy Ratio on GDP

For the variable capital adequacy ratio (0.05), the t-test statistic yields a value of 2.087 with a significance level of 0.041. As a result, the capital adequacy ratio had a significant positive effect on GDP both before and after the Covid-19 pandemic. According to his statement, an increase in bank capital influenced the increase in CAR (Brastama & Yadnya, 2020). It can also be used to speed up the distribution of public credit and allow banks to expand their operational activities (Yu, 2017). The rising capital adequacy ratio in the banking sector has a direct impact on Indonesia's GDP growth (Haryanto et al., 2019).

The capital adequacy ratio, according to (Sunaryo, 2020), is the amount of capital owned by a bank that comes from the general public or from customers in the form of deposits, deposits, and savings. If a bank's capital adequacy ratio falls, so does its capital (Anggriani & Muniarty, 2020). The decrease in CAR at banks can be attributed to a decrease in banks' ability to profit, an increase in the volume of public loans, and an increase in commercial banks' non-performing loans (Badawi, 2017). A decrease in the capital adequacy ratio (CAR) can reduce banking company performance, resulting in a decrease in GDP conditions caused by service companies, particularly in the banking sector.

The Impact of Asset Returns on Gross Domestic Product

The variable return on assets t-test statistic has a value of 2.092 and a significance level of 0.041 (0.05). These findings suggest that return on assets has a significant positive effect on GDP. This statement implies that the bank's ability to increase overall profits from its operational activities has an effect on increasing return on assets (Rahadian & Permana, 2021), particularly by

increasing public trust so that they deposit capital in banks and make public loans. This has the potential to increase bank profits as banks become more efficient (Astawa et al., 2019). Increasing return on assets (ROA) in banking benefits Indonesia's GDP, which appears to be doing well (El Khoury et al., 2021).

Return on assets, as defined by (Sani Akbar et al., 2021), is a metric that measures how profitable a bank's assets are. However, if banks struggle to increase profits due to subpar lending to the general public, bank profits will fall. Declining return on assets (ROA) conditions can lead to poor banking performance (Buallay, 2019), which has an impact on Indonesia's GDP.

CONCLUSION

Net interest margin (NIM), capital adequacy ratio (CAR), and return on assets (ROA) of Indonesian stock exchange-listed commercial banks all have a positive and significant effect on GDP. Net interest margin (NIM), capital adequacy ratio (CAR), and return on assets (ROA) variables at Indonesian stock exchange-listed commercial banks, each of which has a significant positive effect on GDP in the phenomena before and after the COVID-19 pandemic, can be seen quite well before and during the COVID-19 pandemic.

REFERENCES

Anggari, N. L. S., & Dana, I. M. (2020). The Effect of Capital Adequacy Ratio, Third Party Funds, Loan to Deposit Ratio, Bank Size on Profitability in Banking Companies on IDX. *American Journal of Humanities and Social Sciences Research*, *4*(12), 334–338. www.ajhssr.com

Anggriani, R., & Muniarty, P. M. (2020). The Effect of Non-Performing Loans (NPL) and Capital Adequacy Ratio (CAR) on Profitability (ROA) at PT. Bank Central Asia (BCA), TBK. *Ilomata International Journal of Management*, *1*(3), 121–126. https://doi.org/10.52728/ijjm.v1i3.121

Ariwinata, I. P. S. and Badjra, I. B. (2021). Profitability , Company Size , and Gross Domestic Product on Dividend Policy (Empirical Study of Service Companies ... *American Journal of Humanities and Social Sciences Research*, *5*(4), 549–554.

Astawa, K., Suhadak, & Rahayu, S, M. (2019).

Finance and Management Scholar at Riphah International University Islamabad, Pakistan, Faculty of Management Sciences. *Research Journal of Finance and Accounting*, *1*(Ic), 203–222. https://doi.org/10.7176/RJFA

Badawi, A. (2017). Effect of Credit Risk, Liquidity Risk, and Market Risk Banking to Profitability Bank (Study on Devised Banks in Indonesia Stock Exchange). *European Journal of Business and Management*, *9*(29), 1–8. www.iiste.org

Brastama, R. F., & Yadnya, I. P. (2020). The Effect of Capital Adequacy Ratio and Non Performing Loan on Banking Stock Prices with Profitability as Intervening Variable. *American Journal of Humanities and Social Sciences Research (AJHSSR)*, *4*(12), 43–49. https://www.ajhssr.com/the-effect-of-capital-adequacy-ratio-and-non-performing-loan-on-banking-stock-prices-with-profitability-as-intervening-variable/

Brodeur, A., Gray, D., Islam, A., & Bhuiyan, S. (2021). A literature review of the economics of COVID-19. *Journal of Economic Surveys*, *35*(4), 1007–1044. https://doi.org/10.1111/joes.12423

Buallay, A. (2019). Is sustainability reporting (ESG) associated with performance? Evidence from the European banking sector. *Management of Environmental Quality: An International Journal*, *30*(1), 98–115. https://doi.org/10.1108/MEQ-12-2017-0149

Caclini, M. P. (2022). Financial Model : A Practical Tool for Financial Management Practices of Micro-enterprises in Ifugao , Philippines By I . Introduction. *Res Militaris*, *12*(6), 21–36.

Caraka, R. E., Lee, Y., Kurniawan, R., Herliansyah, R., Kaban, P. A., Nasution, B. I., Gio, P. U., Chen, R. C., Toharudin, T., & Pardamean, B. (2020). Impact of COVID-19 large scale restriction on environment and economy in Indonesia. *Global Journal of Environmental Science and Management*, *6*(Special Issue), 65–84. https://doi.org/10.22034/GJESM.2019.06.SI.07

Choiriyah, C., Fatimah, F., Agustina, S., & Ulfa, U. (2021). The Effect Of Return On Assets, Return On Equity, Net Profit Margin, Earning Per Share, And Operating Profit Margin On Stock Prices Of Banking Companies In Indonesia Stock Exchange. *International Journal of Finance Research*, *1*(2), 103–123.

https://doi.org/10.47747/ijfr.v1i2.280

Coscieme, L., Mortensen, L. F., Anderson, S., Ward, J., Donohue, I., & Sutton, P. C. (2020). Going beyond Gross Domestic Product as an indicator to bring coherence to the Sustainable Development Goals. *Journal of Cleaner Production*, *248*, 119232. https://doi.org/10.1016/j.jclepro.2019.119232

Dao, B. T. T., & Nguyen, K. A. (2020). Bank capital adequacy ratio and bank performance in Vietnam: A simultaneous equations framework. *Journal of Asian Finance, Economics and Business*, *7*(6), 39–46. https://doi.org/10.13106/JAFEB.2020.VOL7.NO6.039

Devitra, J. 2013. *Kinerja Keuangan dan Efisiensi Terhadap Return Saham Perbankan di Bursa Efek Indonesia Periode 2007 - 2011*. Journal Finance and Banking Vol. 15 No. 1. ISSN 1410 - 8623.

Duy, S., N., Quang, L., T., Hung, P., K., & Michael, M. 2020. *Net Interest Margin of Commercial Banks in Vietnam.* Journal Advances in Decision Sciences. Vol. 24, Iss. 1.

El Khoury, R., Nasrallah, N., & Alareeni, B. (2021). ESG and financial performance of banks in the MENAT region: concavity–convexity patterns. *Journal of Sustainable Finance and Investment*, *0*(0), 1–25. https://doi.org/10.1080/20430795.2021.1929807

Elnahass, M., Quang, V., & Li, T. (2020). Global Banking Stability in the Shadow of Covid-19 Outbreak Global Banking Stability in the Shadow of Covid-19 Outbreak. *Journal of International Financial Markets, Institutions and Money*, *Volume 72,*(September).

Gallo, A. C. M., & Historiador, V. R. G. (2022). Financial Literacy of the Select Micro and Small Enterprise Owners and Business Performance I . Framework Of the Study II . Materials and Methods. *Res Militaris*, *12*(6), 155–167.

Hanoon, R. N., Rapani, N. H. A., & Khalid, A. A. (2020). The correlation between internal control components and the financial performance of iraqi banks a literature review. *Journal of Advanced Research in Dynamical and Control Systems*, *12*(4 Special Issue), 957–966. https://doi.org/10.5373/JARDCS/V12SP4/20201567

Haryanto, S., Chandrarin, G., & Bachtiar, Y. (2019). Bank Size, Risk and Market Discipline with A Deposit Insurance: Evidence of Banking in Indonesia. *AFRE (Accounting and Financial Review)*, *2*(2). https://doi.org/10.26905/afr.v2i2.3717

Ichsan, R. N., Suparmin, S., Yusuf, M., & Ismal, R. (2021). Determinant of Sharia Bank ' s Financial Performance during the Covid-19 Pandemic. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*, *Volume 4*(1), 298–309.

Kasmir (2020). Studi Kelayakan Bisnis, Jakarta : Prenadamedia Group.

Kurniadi, R. 2012. *Pengaruh CAR, NIM, LDR Terhadap Return Saham Perusahaan Perbankan Indonesia*. Accounting Analysis Journal 1 (1) (2012) ISSN 2252-6765.

Marinkovic, S., dan Radovic, O. 2010. *On the determinants of interest margin in transition banking: the case of Serbia.* Journal Managerial Finance Vol. 36 No. 12, pp. 1028-1042, © Emerald Group Publishing Limited 0307-4358.

Marviana, R.D. 2009. Pengaruh Faktor Fundamental Terhadap Return Saham Perusahaan Perbankan Yang Terdaftar Di Bursa Efek Indonesia. Tesis Fakultas Ekonomi Universitas Sumatera Utara Medan.

Maune, A. (2018). Volume XIII Editorial Board Editor in Chief Executive Manager : Redactors. *Journal of Applied Economic Sciences*, *XIII*(8).

Muthoni, M. I., Mwangi, L. W., & Muathe, S. M. A. (2020). CREDIT MANAGEMENT PRACTICES AND LOAN PERFORMANCE : EMPIRICAL EVIDENCE FROM COMMERCIAL BANKS IN KENYA. *International Journal of Current Aspects in Finance, Banking and Accounting*, *2*(1), 51–63. https://doi.org/10.35942/ijcfa.v2i1.105

O Abba, G., Okwa, E., Soje, B., & N Aikpitanyi, L. (2018). Determinants of Capital Adequacy Ratio of Deposit Money Banks in Nigeria. *Journal of Accounting & Marketing*, *07*(02). https://doi.org/10.4172/2168-9601.1000271

Rahadian, R., & Permana, D. (2021). The Impact of Non-Performing Loans, Return on Assets, Return on Equity, and Loan to Deposit Ratios on Minimum Capital Adequacy Requirement Based on Commercial Banks for Business Activities (BUKU) I 2015-2020. *European*

Journal of Business and Management Research, *6*(6), 42–46. https://doi.org/10.24018/ejbmr.2021.6.6.1084

Rajindra, R., Guasmin, G., Burhanuddin, B., & Anggraeni, R. N. (2021). Costs and Operational Revenue , Loan to Deposit Ratio Against Return on Assets : A Case Study in Indonesia. *Journal of Asian Finance, Economics and Business*, *8*(5), 109–115. https://doi.org/10.13106/jafeb.2021.vol8.no5.0109

Restianti, T., & Agustina, L. (2018). The Effect of Financial Ratios on Financial Distress Conditions in Sub Industrial Sector Company. *Accounting Analysis Journal*, *7*(1), 25–33. https://doi.org/10.15294/aaj.v5i3.18996

Russon, Manuel G and Bansal, V. (2021). A Refined Model to Predict Near-Term US Real GDP Growth. *Journal of Applied Business and Economics*, *Vol.23*(5), 30–36.

Sani Akbar, J., Pertiba, S., & Pinang, P. (2021). the Effect of Return on Assets and Return on Equity on Price To Book Value on Banking Companies Listed on the Indonesia Stock Exchange. *Business and Accounting Research (IJEBAR) Peer Reviewed- International Journal*, *5*(2), 2614–1280.

http://www.jurnal.stie-aas/ijebar

Siska, E., Ahmed, A., Gamal, M., Ameen, A., & Amalia, M. M. (2021). Analysis Impact of Covid-19 Outbreak on Performance of Commercial Conventional Banks : Evidence from Indonesia. *International Journal of Social and Management Studies*, *02*(06), 8–16.

Sunaryo, D. (2020). The Effect Of Capital Adequacy Ratio (CAR), Net Interest Margin (NIM), Non-Performing Loan (NPL), and Loan To Deposit Ratio (LDR) Against Return On Asset (ROA) In General Banks In Southeast Asia 2012-2018. *Ilomata International Journal of Management*, *1*(4), 149–158. https://doi.org/10.52728/ijjm.v1i4.110

Supatmin. (2021). The Effect of Capital Adequacy Ratio (CAR) and Loan To Deposit Ratio (LDR) on Return On Assets (ROA) at PT Bank BNI (Persero) Period 2008 – 2017. *Journal of Business, Management, and Accounting E-ISSN 2714-870X P*, *3*(1), 295–302.

Yu, H. (2017). Motivation behind China's 'one belt, one road' initiatives and establishment of the Asian infrastructure investment bank. *Journal of Contemporary China*, *26*(105), 353–368. https://doi.org/10.1080/10670564.2016.1245894 .