



The Influence of Credit Risk, Liquidity Risk, and Capital Adequacy on Financial Performance in the Banking Sector Listed on the Indonesia Stock Exchange 2016-2020 Period: Before and During Covid-19

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ABSTRACT

Financial performance in a bank can be measured by return on assets. Return on assets can be used to measure the effectiveness of a company in achieving profits by utilizing its assets. This study aims to determine the effect of NPL, LDR, CAR, Bank Size, and BOPO on financial performance. This study also aims to determine the effect of the Covid-19 pandemic before and during the COVID-19 pandemic. This research was conducted on banking companies listed on the Indonesia Stock Exchange (IDX) for the period 2016 - 2020. The sample was determined using the purposive sampling method and the number of samples selected was 37 banks. The data collection used is secondary data. The data analysis technique used is Panel data regression analysis. The results of the analysis of this study indicate that the first hypothesis is found that credit risk has a negative and significant effect on financial performance. The second hypothesis finds that liquidity risk has a negative and insignificant effect on financial performance. And the third hypothesis is that it is found that capital has a negative and significant effect on financial performance. The results of the fourth test of the four control variables have a positive and significant effect on financial performance, the fifth hypothesis has a negative and significant effect on financial performance. Subsequent research results from 37 banks showed that CAR had differences in financial performance before and during the COVID-19 period, while NPL, LDR, Bank Size.

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INTRODUCTION

At the beginning of 2020 the whole world was shocked by a virus known as the Corona Virus or by another name, namely Covid-19, where the Corona Virus first appeared in Wuhan, China at the end of 2019. Covid-19 quickly spread throughout the world including Indonesia. The entry of the Covid-19 outbreak into Indonesia was announced on March 2, 2020. Since then the number of cases affected

by Covid-19 has continued to increase every day (Riftiasari & Sugiarti, 2020).

The rapid spread of the Covid-19 outbreak has had an impact on the Indonesian economy, especially the banking sector. Banks as financial institutions, in order to operate optimally, banks are required to maintain stable financial performance. The condition of a company can be seen from the company's performance. The most widely used parameter to assess a company's performance is the financial approach of the financial statements. The ratio of the financial statements itself is the most important thing to consider in running a company. And also the financial performance of banks which will affect the soundness of the bank. To find out the impact of Covid-19 on the health of banks, it requires objective and precise benchmarks.

By using financial indicators, namely capital adequacy, asset quality, management competence, earnings quality, and liquidity (CAMEL). The CAMEL framework was developed by the US central bank in the early 1970s to assist the process of structuring bank checks. since then, the use of this CAMEL factor evaluates the financial health of banks and is widespread among regulators (Dzeawuni and Tanko, 2008). Therefore, the benchmark used can refer to the regulations issued by Bank Indonesia (BI) No.13/1/PBI/2011, No.6/10/PBI/2004 dated April 12, 2004 concerning the rating system for the soundness of commercial banks. and Bank Indonesia circular letter No.6/23/DPNP dated May 31, 2004 regarding procedures for researching the soundness level of commercial banks (Pandia, 2012:224).

According to the book of the Indonesian Bankers Association, liquidity risk can be defined as the risk due to the inability of banks to meet maturing obligations (Indonesia, 2015). The ability of bank liquidity can be said to be good if the bank can channel funds to customers and when customers make withdrawals. On the other hand, if the bank is unable to meet the funds withdrawn by the customer or the user of the funds cannot return the borrowed funds, there will be liquidity risk (Ramadanti & Meiranto, 2015). Thus, liquidity risk is the risk of not being able to liquidate in a timely manner. The liquidity measuring instrument that is often used is the LDR (Loan to Deposit Ratio) ratio. As according to (Nuryanto et al.,

Capital adequacy is the ability of banks to maintain sufficient capital and the ability of bank management to identify, measure, supervise, and control the risks that arise that can affect the amount of bank capital (Cuaca et al., 2020). Capital adequacy is how a bank is able to finance its activities with its capital ownership (Agustini et al., 2017). The indicator used in measuring capital adequacy is the Capital Adequacy Ratio (CAR) because this ratio aims to ensure that if a bank suffers a loss in its activities, the availability of capital owned by the bank is able to cover the loss (Mauliza & Daud, 2016).

In this study, the focus was carried out with the aim of knowing the effect of credit risk, liquidity risk and capital adequacy on financial performance. This research was conducted to assist related parties in seeing the impact of bank health on bank financial performance before and during the COVID-19 pandemic. The object used is a company in the banking sector listed on the IDX in the 2016-2020 period.

RESEARCH METHOD

The subjects of this study were conventional banks listed on the Indonesia Stock Exchange (IDX) in the period 2016 – 2020. The subjects of this study consisted of 37 banks. In this study, there are restrictions on the ratio of the company's financial statements, aiming to facilitate research in collecting data from 37 banks. The ratios taken are from the financial statements for the period 2016 – 2020.

In this paper, the data collection method used is secondary data. The data was obtained from several sources of library research by studying various reference books on theories relevant to this research to obtain information or in the form of data which will then be analyzed. This study uses panel data regression analysis. Panel data has the advantage that it provides better data for detecting

effects that cannot be observed in time series and cross section data, and is more informative. In testing, this writing will be done with the help of the Stata computer program.

RESULT AND DISCUSSION

Financial Performance Panel Regression Results with Pooled Least Square

Table 1. Financial Performance Panel Regression Results with Pooled Least Square

Variable	Coef	Probability	Information
Constant	3.934748	0.020	
Credit Risk	-0.1428425	0.015	Significant
Liquidity Risk	-0.0025721	0.491	Not significant
Capital Adequacy	-0.0005973	0.925	Not significant
Bank Size	0.1249553	0.008	Significant
BOPO	-0.0699887	0.000	Significant

Source: Stata15 (processed)

The first hypothesis for the dependent variable of financial performance is that the independent variable credit risk has a negative and significant effect on financial performance. Based on table 4.9 that the credit risk coefficient is -0.1428425 and significant. The magnitude of this value indicates a negative direction and there is a relationship between credit risk and financial performance. $0,015 < 0,05$.

The second hypothesis for the dependent variable of financial performance is that the independent variable liquidity risk has a negative and insignificant effect on financial performance. Based on table 4.24 that the profitability coefficient is -0.0025721 and is not significant. The magnitude of this value indicates a negative direction and there is no relationship from liquidity risk to financial performance. $0,491 > 0,05$.

The third hypothesis for the dependent variable of financial performance is that the independent variable of capital adequacy has a negative and insignificant effect on financial performance. Based on table 4.24 that the profitability coefficient is -0.0005973 and is not significant. The magnitude of this value indicates a negative direction and there is no relationship between capital adequacy and financial performance. $0,925 > 0,05$.

The fourth hypothesis for the financial performance control variable is that bank size has a positive and significant effect on financial performance. Based on table 4.24 that the coefficient of bank size is 0.1249553 and is significant. The magnitude of this value shows that there is a positive direction of bank size on financial performance and has a relationship. $0,008 < 0,05$.

The fifth hypothesis for the financial performance control variable is that BOPO has a negative and significant effect on financial performance. Based on table 4.24, the BOPO coefficient is -0.0699887 and significant. The magnitude of this value shows that there is a positive direction of BOPO on financial performance and has a relationship. $0,000 < 0,05$

Table 2. of Two Sample t-Test Results with Paired Sample t-test

	mean Before (2016-2019)	mean After (2020)	Difference	t
Financial performance	0.8524	0.6889	0.16	0.4223
Credit Risk	2.0972	1.8172	0.28	1.0745
Liquidity Risk	84,3126	78,8760	5.44	1.6074
Capital Adequacy	21.8388	27,24297	-5.40	-2.6141
Bank Size	31.3295	31.6165	-0.29	-0.8876
BOPO	92.2545	96.562	-4.31	-0.9809

Source: Stata15 (processed)

0098 means that this hypothesis is accepted which indicates that there is a significant difference in capital adequacy on financial performance between before and during the 2020

pandemic. The results of the fifth test, the size of the bank also shows a p value (value) of 0.3759, meaning that this hypothesis is rejected which indicates that there is an insignificant difference to financial performance between before and during the 2020 pandemic. The results of the fifth test, the p value (value) on the BOPO is 0.3279, meaning that this hypothesis is rejected. This shows that there is an insignificant difference in BOPO financial performance between before the 2016-2019 pandemic and during the 2020 pandemic. The size of the bank also shows a p value (value) of 0.3759, meaning that this hypothesis is rejected which indicates that there is an insignificant difference in financial performance between before and during the 2020 pandemic. The results of the fifth test, the p value (value) on the BOPO is 0,3279 means that this hypothesis is rejected. This shows that there is an insignificant difference in BOPO financial performance between before the 2016-2019 pandemic and during the 2020 pandemic. The size of the bank also shows a p value (value) of 0.3759, meaning that this hypothesis is rejected which indicates that there is an insignificant difference in financial performance between before and during the 2020 pandemic. The results of the fifth test, the p value (value) on the BOPO is 0,3279 means that this hypothesis is rejected. This shows that there is an insignificant difference in BOPO financial performance between before the 2016-2019 pandemic and during the 2020 pandemic.

CONCLUSION

The conclusion obtained from the results of the analysis and previous discussion is that the first hypothesis is found that credit risk has a negative and significant effect on the financial performance of banks listed on the Indonesia Stock Exchange in 2016-2020. The second hypothesis is found that liquidity risk has a negative and insignificant effect on financial performance. And the third hypothesis is found that capital adequacy has a negative and insignificant effect on financial performance

The results of testing the fourth hypothesis, namely the control variable, found that the size of the bank had a positive and significant effect on financial performance. The fifth hypothesis was found that BOPO had a negative and significant effect on financial performance.

Furthermore, the results of research from 37 banks showed that CAR had differences in financial performance before and during the COVID-19 period, while NPL, LDR, Bank Size, BOPO had no differences in financial performance before and during the Covid-19 period.

There are several shortcomings and weaknesses caused by the limitations of the results found in the study, including the sample used is limited to conventional general banking companies. Therefore, further research should be able to use a larger sample size or include other financial institutions that are also listed on the Indonesia Stock Exchange.

And for further researchers it is also recommended to use more samples with more diverse characteristics and extend the research period. In addition, further research should also add other independent variables that also affect the bank's financial performance, including Net Interest Margin, Company Size and so on.

Reference

- Alam, S., & Nohong, M. 2019. The Effect of Institutional Ownership, Capital Adequacy Ratio (CAR) and Loan Deposit Ratio (LDR) on Indonesia's Effect The Effect Of Institutional Ownership, Capital Adequacy Ratio (CAR) And Loan Deposit Ratio (LDR)) On Profitability. 109-123
- Ali, M., & Puah, CH (2019). The internal determinants of bank profitability and stability: An insight from the banking sector of Pakistan. *Management Research Review*, 42(1), 49-67. <https://doi.org/10.1108/MRR-04-2017-0103>
- Weather, C., Simangunsong, I., Maharani, A., & Sari, IR (2020). The Influence of Capital Adequacy Ratio (CAR), Non Performing Loan (NPL), and Operating Costs Operating Income (BOPO) on Profitability in Banks Listed on the Indonesia Stock Exchange for the 2016-2018 Period. 2(5).
- Dendawijaya, L. (2019). Analysis of the Effect of Loan To Deposit Ratio (Panca Satria Putra/Septi Juniarti).

- Fahmi. (2018). Effect of Capital Adequacy Ratio, Non Performing Loan, Loan To Deposit Ratio on Return On Assets Faculty of Economics and Business Udayana University, Bali, Indonesia The economy as a whole benefits from the existence of a bank. According to. 7(5), 2410-2441.
- Gabriel, O. (2019). Effect of Non-Performing Loans on the Financial Performance of Commercial Banks in Nigeria. 1(2), 1-9.
- Hu, T., & Xie, C. (2016). Competition, Innovation, Risk-Taking, and Profitability in the Chinese Banking Sector: An Empirical Analysis Based on Structural Equation Modeling. *Discrete Dynamics in Nature and Society*, 2016. <https://doi.org/10.1155/2016/3695379>
- Kasmir, Putranto, AA, Kristanti, FT, Putra, D., Mahardika, K., & Telkom, U. (2017). Capital Adequacy Ratio, Loan Deposit Ratio And Non. 9(2), 88-93.
- Kusmayadi, D. (2018). *Saudi Journal of Business and Management Studies (SJBMS)* Analysis of Effect of Capital Adequacy Ratio , Loan to Deposit Ratio , Non Performing Loan , Bopo , and Size on Return on Assets in Rural Banks at Indonesia. 6663. <https://doi.org/10.21276/sjbms.2018.3.7.4>
- Mandasari. (2018). No Title.
- Nurhayati, Hanafi, & Agustini. (2017). Effect of Capital Adequacy and Credit Risk on Profitability: Liquidity as a Mediator at Rural Banks in Badung Regency, Faculty of Economics and Business, Udayana University (Unud), Bali, Indonesia INTRODUCTION decreased by 0, 2.6, 2161-2192.
- Nuryanto, UW, Salam, AF, Sari, RP, & Suleman, D. (2020). The Effect of Capital Adequacy Ratio, Liquidity, Credit Risk and Cost Efficiency on Profitability in Go Public Banks. 7(1), 1-9.
- Perdana, H, Adrianto, F. (2020). Effect of Corporate Governance Mechanism, Capital Adequacy Ratio, and LDR on Banking Financial Performance (April 2020), https://scholar.google.com/scholar?hl=id&as_sdt=0%2C5&q=fajri+adrianto&btnG=&oq=
- Pessarossi, P., Thevenon, JL, & Weill, L. (2020). Does high profitability improve stability for European banks? *Research in International Business and Finance*, 53(July 2019), 101220. <https://doi.org/10.1016/j.ribaf.2020.101220>
- Prasetyo, W. (2015). Analysis of Factors Affecting Banking Profitability. 7(1), 46-54.
- Prastiyaningtyas, Mauliza, Scientific, J., & Economics, M. (2016). The Influence of Capital Adequacy and Competition on Profitability on Profitability of Islamic Banks in Indonesia, Dessy Mauliza 1 , Rulfah M. Daud Accounting Department, Syiah Kuala University, Banda Aceh. 1(1).
- Ramadanti, F., & Meiranto, W. (2015). Profitability of Banking Companies in Indonesia. 4, 1-11.
- Riftiasari, D., Bina, U., Informatics, S., Bina, U., & Informatics, S. (2020). Analysis of the Financial Performance of Conventional BCA and BCA Syariah Banks Due to the Impact of the Covid-19 Pandemic 33(2), 78-86.
- Rudianto. (2020). The Impact of the Covid-19 Pandemic on the Performance of Property and Real Estate Companies listed on the IDX. 4(2), 133-141.
- Setyarini, A. (2020). P- ISSN : 2550-0171 (Study on Regional Development Banks in Indonesia for the 2015-2018 Period) *Research Fair Unisri 2019* P-ISSN : 2550-0171. 4(1), 282-290.
- Su, S., Lee, H., Chou, J., & Chen, H. (2020). No Title. 3(02), 137-150.
- Suminar. (2020). The Effect of Capital Adequacy Ratio (CAR), Loan To Deposit Ratio (LDR) And Non Performing Loan (NPL) Towards Return On Assets (ROA) In The Banking Sector In Indonesia Stock Exchange Effect Of Capital Adequacy Ratio (CAR), Loan To Deposit Ratio (LDR)) D. 01(01).
- 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. 1(4), 149-158.
- Taherinia, M., & Baqeri, A. (2018). The Effect of Capital Adequacy Ratio on the Ratio of the Bank Reserves Accepted in the Tehran Stock Exchange. 8(1), 161-167.
- Tangngisalu, J., Hasanuddin, R., & Hala, Y. (2020). Effect of CAR and NPL on ROA : Empirical Study in Indonesia Banks. 7(6), 9-18. <https://doi.org/10.13106/jafeb.2020.vol7.no6.009>
- Tiyas, W. &. (2015). Analysis of the Effect of Capital Adequacy, Liquidity, Credit Risk and Cost Efficiency. 2011, 99-109.
- Vives, X. (2019). Competition and stability in modern banking: A post-crisis perspective. *International Journal of Industrial Organization*, 64, 55-69. <https://doi.org/10.1016/j.ijindorg.2018.08.011>
- Zulfikar. (2016). The Effect of Non-Performing Loans (NPL) and Loan To Deposit Ratio (LDR) on Return On Assets ON (ROA) with Capital Adequacy Ratio (CAR) as Intervening Variables (Study on Commercial Banks Listed on the Stock Exchange for the Period of 2012-2015). 2(2), 28-47.