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The Determinant of Banking Profitability of BUKU IV Bank in Indonesia (2019-2020)*

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Abstract
This research focuses on the study the determinant on banking profitability of seven private banking in Indonesia. The data panel was analyzed using a fixed-effect model. This study results partially that the independent variables of capital adequacy ratio and BOPO significantly affected profitability (return on asset), while the independent variables of non-performing loan and loan to deposit ratio had no significant effect on profitability (return on asset) in 2020. However, generally, these four variables affect profitability (return on asset) during the Covid-19 pandemic. The global and national macroeconomic conditions are one of the reasons that effect the banking sector returns on assets (ROA). The challenging global economic conditions with the ongoing US-China Trade War triggered a major impact on the Chinese economy and the volatility of the Asian Region from commodity prices. After the US General Election in November 2020, many industrial players took a "wait and see" attitude, waiting and seeing the upcoming policies on trade and capital flows in the region. The health crisis due to the Covid-19 pandemic also put pressure on the global and national economy as well as the handling of the pandemic with the global social situation that creates financial market uncertainty in 2020. People's mobility is greatly reduced until it reaches its lowest point in March-May 2020. The existence of these uuncertainfinances has an impact on market conditions and the investment behavior of the public.
Keywords: *covid-19; profitability; return on the asset; banking industry*

Abstrak
Penelitian ini bertujuan untuk mengetahui faktor-faktor yang berpengaruh terhadap profitabilitas perbankan, khususnya pada 7 Bank yang termasuk dalam kategori Bank BUKU IV di Indonesia. Data didapatkan berdasarkan laporan keuangan perbankan, dianalisa menggunakan alat regresi dengan metode data panel. Pendekatan model estimasi regresi yang digunakan yaitu pendekatan efek tetap. Hasil penelitian menunjukan bahwa secara parsial, variabel independen *capital adequacy ratio* dan BOPO secara signifikan berpengaruh terhadap profitabilitas (*return on asset*), sedangkan variabel independen lainnya yaitu *non performing loan* dan *loan to deposit ratio* tidak berpengaruh signifikan terhadap profitabilitas (*return on asset*) pada tahun 2020. Akan tetapi, secara keseluruhan, keempat variabel independen tersebut berpengaruh terhadap profitabilitas (*return on asset)* pada masa pandemi Covid-19. Kondisi ekonomi makro secara global dan nasional merupakan salah satu alas an

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pengaruh *return on asset* sektor perbankan. Kondisi perekonomian global yang penuh tantangan dengan berlanjutnya Perang Dagang AS-China memicu dampak besar bagi perekonomian China dan volatilitas Kawasan Asia dari harga komoditas. Pasca Pemilihan Umum AS pada November 2020, banyak pelaku industri mengambil sikap "*wait and see*", menunggu dan melihat kebijakan perdagangan serta arus modal yang akan datang. Krisis kesehatan akibat pandemi Covid-19 juga memberikan tekanan pada perekonomian global dan nasional serta penanganan pandemi dengan situasi sosial global yang menciptakan ketidakpastian pasar keuangan pada tahun 2020. Mobilitas masyarakat sangat berkurang hingga mencapai titik terendah pada Maret-Mei 2020. Adanya ketidakpastian keuangan tersebut berdampak pada kondisi pasar dan perilaku investasi masyarakat.
Keywords: Covid-19; profitabilitas; return on asset, industri perbankan

A. INTRODUCTION

Economic growth is a continuous change of economic conditions to a better state at certain period. An economic condition is called advancing if the current level of economic development is higher than previous period. For 14 quarters since 2015, Indonesia's economic growth are stable and consistent, on the range of 4.9% - 5.3%[3]. Since November 2018, Indonesia's macro-financial conditions have improved and followed the global financial turmoil that occurred in mid-2018 when capital outflows from developing countries were greater than the interest rates in the United States. Indonesia's economic growth in 2019 is projected to reach 5.1% and it will reach 5.2% in 2020. Growth on public consumption is expected to be continued, therefore supported by a low inflation rate and a strong labour market.

Indonesia's economic growth in 2020 is highly dependent on external factors. The Central Statistics Agency of Indonesia (BPS) reported that the Republic of Indonesia's economic growth was minus 2.07 percent at the end of 2020. This deteriorating situation began with the discovery of the first Covid-19 in Indonesia in March 2020 and is escalating daily. According to government data, as the number of Covid-19 cases increased until it reached 4001 in December 2020, the pandemic has not only created a public health crisis, but also disrupted economic activity in Indonesia. The banking industry's revenue projection for 2020 was 90 trillion rupiah, but following the emergence of Covid-19, the banking industry's revenue projection decreased by 7% to 10%. The bank's non-performing loan (NPL) ratio increased to 3.06 percent (gross) or 0.98 percent (net) in 2020 from a low of 0.98 percent in 2019[4].

The projection of the banking industry's income for 2020 will reach Rp 90 trillion, but after the emergence of Covid-19, the estimated banking income are fall by 7%-10%

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[3] Badan Pusat Statistik (2019). *Pertumbuhan Ekonomi Indonesia.* Jakarta. Accessed from https://www.bps.go.id/pressrelease/2021/02/05/1811/ekonomi-indonesia-2020-turun-sebesar-2-07-persen--c-to-c-.html#:~:text=Perekonomian%20Indonesia%202020%20yang%20diukur,%2Dc)%20dibandingkan%20tahun%202019

[4] Otoritas Jasa Keuangan. (2020). *Statistik Perbankan Indonesia.* Jakarta. https://www.ojk.go.id/id/kanal/perbankan/data-dan-statistik/statistik-perbankan-indonesia/Pages/Statistik-Perbankan-Indonesia---Desember-2020.aspx

(Ikhsan, 2020). The *Non-Performing Loan* (NPL) ratio in 2019, which was recorded low, has increased to 3.06% (gross) or 0.98% (net)[5].

Based on previous information and research results, it is certain that non-performing loans, loan to deposit ratio, operational loads, operating income and capital adequacy ratio are factors that have a significant effect on bank profitability, as well as unexpected events that will affect banking profitability. Compared to the monetary crisis in 1998 and the global crisis in 2008, non-performing loans, loan to deposit ratios, capital adequacy ratios and BOPO have a significant effect on profitability. So, the researcher wants to know the impact of economic shocks such as the ongoing Covid-19 pandemic which has an impact with a repeating pattern as in the previous crisis.

BUKU IV Bank, which has a capital above 30 trillion, in 2019 remained solid even though it's credit growth in 2019 was only recorded at 6%. BUKU IV Bank category is the bank with the best credit quality so far. The BUKU I and BUKU III banks were recorded negative growth in 2020 which were at 42.0% and 4.1% growth, whereas the BUKU II banks remain stagnant. Only the BUKU IV Banks is still recorded growth in their performance of 10.4%[6].

Literature Review

Financial Performance

Assessments of a company's performance are necessary to ensure that their actions align with the organization's strategic goals. According to Ivancevich[7], performance is an accomplishment for what has been accomplished during a specified time period. Work measurement is critical for the management control system of the business. An organization's performance can be measured in a variety of ways, including long-term performance, short-term performance, financial performance, non-financial performance, and relationship-building performance. A company's financial performance must be measured in order to determine the success of financial matters. Additionally, Ivancevich[8] stated that accurately measuring financial performance is critical for organizational goals and is a major concern for the majority of organizations. Keisidou[9] said in the banking world, financial performance is one of the tools used to determine a bank's rating, and thus to assess several risk factors that are used as the primary criterion for each bank. According to Panggabean[10], necessary conditions to

[5] *Ibid*

[6] Otoritas Jasa Keuangan, loc.cit

[7] Ivancevich, John M., Robert Konopaske, Michael T. Matteson. Perilaku dan Manajemen Organisasi. Jil. 2. Jakarta: Erlangga. 2012

[8] *ibid*

[9] Keisidou, Sarigiannidis, Lazaros., Maditinos, Dimitrios. (2013) Customer satisfaction, loyalty and financial performance: a holistic approach of the Greek banking sector. *International Journal of Bank Marketing, Vol 31, No. 4, 259-288*

[10] Panggabean, Martin P.H., Panggabean, Stefan B. Key Determinants of Indonesia's Banks Financial Peformance. *Jurnal Akuntansi dan Keuangan, Vol. 21, No. 2*, 58-67

monitor include net interest margin, return on asset, capital adequacy ratio, and nonperforming loan. These variables can be used to determine the profitability of a banking institution.

Profitability

Profitability is important for any business, including those in the banking industry, as it has a significant impact on the value of the company. Profitability has a direct effect on the stock market price, which in turn increases the company's value. Profitability measurement is essential for ensuring that a company meets its profit target. Sari[11] stated that a profitable business will be able to maintain its profitability over time. Menicucci and Paolucci[12] stated that several methods for calculating bank profitability exist, including return on equity, return on assets, and net interest margin. Meniccuci and Polucci[13] said that the three metrics illustrate how profitability has changed over time.

Previous Research

Menicucci and Paolucci[14] found that the capital adequacy ratio had a significant effect on banking profitability in their research. According to Alyousfi and Saha[15], the loan-to-deposit ratio and capital adequacy ratio had a sizable effect on Bank GCC. However according to Dietrich with Wanzenried[16], operating expenses, operating income, and capital adequacy ratios all had a significant impact on profitability. Per the Tan, Floros, and Anchor[17], the net interest margin, loan-to-deposit ratio, and capital adequacy ratio all have a significant effect on bank profitability. Sari, Syam, and Ulum[18] stated that during the 1998 global crisis, non-performing loans had a significant impact on banking profitability in Indonesia. Tumin and Said[19] examined the impact of bank-specific factors using return on asset and return on equity and concluded that operating ratios have a significant impact on banking profitability in China. According to Widiarti, Siregar, and Andati[20], nonperforming loans, loan-to-deposit ratios, bank size, cost

[11] Sari, Tia Melya., Syam, Dhaniel., Ulum, Ihyaul. Pengaruh non performing loan sebagai dampak krisis keuangan global terhadap profitabilitas perusahaan perbankan. *Journal of accounting and investment, Vol. 13, No. 2.* 83-98.

[12] Menicucci, E., & Paolucci, G. (2016). The determinants of bank profitability: empirical evidence from European banking sector. *Journal of Financial Reporting and Accounting, Vol. 14 No. 1*, 86-115

[13] *Ibid,113*

[14] *Loc.cit*

[15] Alyousfi, Abdulazeez., Saha, Asish., Rus, Rohani (2018). The impact of bank competition and concentration on bank risk-taking behavior and stability: evidence from GCC countries. *The north American journal of economics and finance. Vol.51. No. 2, 118-123*

[16] Dietrich, Andreas., Wanzenried, Gabrielle., (2011), Determinants of bank profitability before and during the crisis: evidence from Switzerland. *Journal of international financial market, institutions, and money. Vol. 21, No. 3.* 307-327

[17] Tan, Y., Floros, C. and Anchor, J. (2017). The profitability of Chinese banks: impacts of risk, competition and efficiency. *Review of Accounting and Finance*. *Vol. 16 No. 1*, 86-105

[18] *Loc.cit*

[19] Said, R. M., and Tumin, M. H. (2011). Performance and financial ratios of commercial banks in Malaysia and China. *International Review of Business Research Papers*, 7(2), 157–169.

[20] Widiarti, A. W., Siregar, H., and Andati, T. (2015). The determinants of bank’s efficiency in indonesia. Bulletin of Monetary Economics and Banking, 18(2), 129–156

efficiency ratios, and capital adequacy ratios all have a significant impact on Indonesia's banking sector.

B. METHODS

This is a descriptive study that will collect data and information about the required variables, including capital adequacy, loan-to-deposit ratio, operating expenses and income, and non-performing loans, using a quantitative approach. After conducting a quantitative descriptive analysis of the data, the researcher conducted an event study to determine how banking profitability changed prior to and following the Covid 19 pandemic.

The data for this study were compiled through a review of the literature, which included copying and archiving data from previously published sources. The data came from two online sources: the Indonesian Stock Exchange (IDX) and the websites of companies in the banking sector. Additionally, secondary data is gathered from journals, articles, books, verified online sources, and other scholarly sources. To determine the effect of the independent variable on the dependent variable, the author used regression analysis with a panel data model.

To estimate regression using panel data, three approaches are used: pooled least squares models, fixed-effect models, and random effect models. For data processing, the author employs four tests: normality, multicollinearity, autocorrelation, and heteroscedasticity. If the classical assumption test passes all four tests, the study's data are considered to produce objective and accountable conclusions.

The study's population is the entire Indonesian banking sector, which consists of 44 banks that are publicly traded on the Indonesian Stock Exchange (IDX). Purposive sampling was used to select the sample, which included banks that were listed on the IDX in 2019-2020 (quarterly) and banks with core capital greater than 30 trillion, totalling seven banks for the research sample.

C. RESULTS AND DISCUSSION

1. Bank BUKU IV's Financial Performance

A company needs to measure its performance accurately as a benchmark for the company, one of which is financial performance. Accurate measurement of financial performance is very important for organizational goals and a major concern for most organizations. In the world of banking, financial performance is one of the toolt used is to assess the bank health level, assess several opportunities for risk and all of it is used as the main key for every bank.

Table 1 Banking's Financial Ratio in Indonesia

Ratio	2019	2020
Return on asset	2.47%	1.76%
Capital adequacy ratio	23.40%	23.52%
Loan to deposit ratio	94.34%	83.46%
BOPO	79.39%	86.58%
Non Performing Loan	2.63%	3.06%

Based on the table above, it can be seen that there is a decline in banking profitability in Indonesia which is illustrated by the return on assets in 2020. A good return on assets should increase every year, thus indicating that the company's performance and company efficiency are increasing. The declining return on assets indicates the existence of factors that affect the company's profitability. The decline in return on assets can be caused by both internal and external factors of the company.

Bank BNI experienced a decrease in the return on assets ratio in 2020. Return on assets decreased by 1.90% compared to 2019. Bank BRI's return on assets decreased by 1.52% compared to 2019. Bank BCA's return on assets decreased by 0.7% compared to 2019. Return on assets of Bank Mandiri decreased by 1.39% compared to 2019. Return on assets of Bank Panin decreased by 0.17% compared to 2019. Return on assets of Bank CIMB Niaga decreased by 0.79% compared to 2019. Return on assets of Bank Danamon decreased by 1.31% compared to 2019.

The capital adequacy ratio is used to see the amount of risk of loss that may be confronted by a bank. The capital adequacy ratio is used by investors to see capital level of the bank. The capital adequacy ratio of banking in Indonesia has increased by 0.12% in 2020, this can be said that it is good because it's indicates the ability of banks to be better in overcoming risks to risky assets.

Bank BNI's capital adequacy ratio decreased by 2.90% in 2020. Bank BRI experienced an increase in its capital adequacy ratio of 0.10% in 2020. Bank BCA's capital adequacy ratio increased by 2.41% in 2020. Bank Mandiri's capital adequacy ratio decreased by 0.8% in 2020. Bank Panin's capital adequacy ratio increased by 6.23% in 2020. CIMB Bank's capital adequacy ratio increased by 3.59% in 2020. Bank Danamon's capital adequacy ratio increased by 1.02% in 2020.

Loan to deposit ratio is used by banks to see the ability of banks to disburse loans to debtors compared to funds received from third party funds. The loan to deposit ratio of Indonesian banks decreased by 10.88% in 2020. The declining loan to deposit ratio means that the Bank reduces the provision of funds to debtors. Banks are considered liquid because they have more capacity to channel funds to debtors.

Bank BNI's loan to deposit ratio decreased by 4.20% in 2020. BRI's loan to deposit ratio decreased by 4.98% in 2020. BCA's loan to deposit ratio decreased by 14.7% in 2020.

Bank's loan to deposit ratio Mandiri decreased by 13.42% in 2020. Bank Panin's loan to deposit ratio decreased by 24.66% in 2020. Bank CIMB's loan to deposit ratio decreased by 14.58% in 2020. Bank Danamon's loan to deposit ratio increased by 15.18 % in 2020.

Operating Expenses and Operating Income are often used to analyze a bank's ability to manage its operating expenses. It can be seen that there is an increase in the BOPO ratio of 7.19%. An increase in the BOPO ratio can be mean that companies cannot manage operating expenses on their companies. A good BOPO should have a smaller number each year. This indicates that the company has a better performance.

Bank BNI experienced an increase in the BOPO ratio of 20.14%. Bank BRI experienced an increase in the BOPO ratio of 11.12%. Bank BCA experienced an increase in the BOPO ratio of 4.36%. Bank Mandiri experienced an increase in the BOPO ratio of 12.59%. Panin Bank experienced an increase in the BOPO ratio by 1.58%. Bank CIMB Niaga experienced an increase in the BOPO ratio by 6.74%. Bank Danamon experienced an increase in the BOPO ratio of 8.44%.

The ratio of non-performing loans can describe the health of assets in a bank. This ratio can be used to assess the company's management related to credit risk. It can be seen that there is an increase in the NPL ratio of 0.43%. The higher the NPL ratio indicates that the higher the bad loans disbursed to debtors. This has a negative impact on banks because it can affect the distribution of funds in the following year.

Bank BNI experienced an increase in the NPL ratio of 2.0%. Bank BRI experienced an increase in the NPL ratio of 0.32%. Bank BCA experienced an increase in the NPL ratio of 0.40%. Bank Mandiri experienced an increase in the NPL ratio of 0.90%. Panin Bank experienced a decrease in the NPL ratio of 0.01%. Bank Danamon experienced a decrease in the NPL ratio of 0.25%.

2. Panel Data Regression Analysis

The research findings are related to the factors that influence the independent (independent) variables, which are measured through a variety of ratios, including capital adequacy, operating expenses and income, non-performing loans, and loan to deposit ratios, while the dependent variable (dependent) is profitability (return on asset). The researcher utilizes financial statements for the 2019 and 2020 quarters, which were obtained and collected from the IDX official website and the official websites of related companies.

3. Model Estimation Test

A total of 56 data samples were entered and processed. To use an appropriate model, a model estimation test is required. The chow and hausman tests are used to determine the most appropriate model among the common effect, fixed effect, and random effect models. It is known that the probability result of cross section F is 0.0084 (0.05) for the chow test and 0.0007 (0.05) for the hausman test. It can be concluded that the panel model for estimating the effect of capital adequacy ratio (CAR), loan to deposit ratio (LDR), operating expenses and income (BOPO), and non-performing loans (NPL) on return on assets (ROA) in banking (Bank Book 4) is the fixed effect model.

Table 2 Fixed Effect Model

Variable	Coefficient	Std. Error	t-Statistic	Prob
CAR	0.033812	0.023312	1.450453	0.1531
LDR	-0.007666	0.012838	-0.597112	0.5531
BOPO	-0.003074	0.001830	-1.680386	0.0990
NPL	-0.386956	0.109859	-3.522291	0.00009
C	0.022529	0.010716	2.102428	0.0405

R-squared	0.268008	Mean dependent var	0.010804
Adjusted R-squared	0.210597	S.D. dependent var	0.006437
S.E. of refression	0.005719	Akaike info criterion	-7.404978
Sum square resid	0.001668	Schwarz criterion	-7.224143
Log likelihood	212.3394	Hannan-Quinn criter	-7.334868
F-statistic	4.668217	Durbin-Watson stat	1.612942
Prob (F-statistic)	0.002747		

Table 3 Chow Test Result

Effects Test	Statistic	d f	Prob
Cross-section F	3.334131	(6,45)	0.0084
Cross-section Chi-square	20.596711	6	0.0022

Table 4 Hausman Test Result

Table Summary	Chi-Sq Statistic	Chi-Sq d f	Prob
Cross-section random	19.180587	4	0.0007

4. Classic Assumption Test

To obtain a more accurate prediction of the results, it is necessary to develop a model that meets the criteria for testing the classical assumptions. The normality test results indicate that the resulting probability is 0.427445, indicating that the data is normally distributed.

Figure 1 Normality Test Result

The multicollinearity test indicates that there is no correlation between the independent variables. The results indicate that the correlation between variables is less than 0.90, implying that there is no multicollinearity between the independent variables or that the data are not similar.

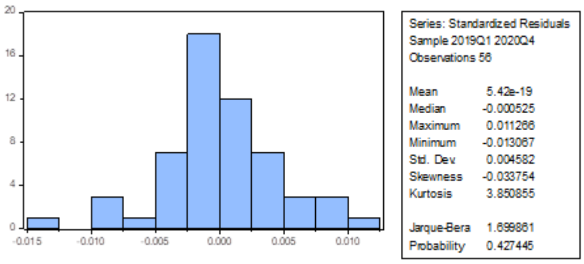

Table 5 Multicollinearity Test Result

	CAR	LDR	BOPO	NPL
CAR	1	- 0.2524708323017	0.07936745498287	0.05506153912250
LDR	- 0.2524700832301	1	- 033382752901042	-0.8121751502205
BOPO	007936745498287	- 0.3338275290104	1	0.15421856352433
NPL	0.0550615391225	- 0.1821751502205	0.15421856352433	1

The heteroscedasticity test is used to determine whether the variance of the residuals or other observations in a regression model is unequal. A good regression model is either homoscedastic or homoscedastic. According to the test results, the probability generated for each variable is greater than 0.05. This can be interpreted as indicating that the existing data do not exhibit heteroscedasticity. The model can then be declared valid if it passes the heteroscedasticity test.

Table 6 Heterokedasticity Test Result

R-squared	0.350673	Mean dependent var	0.004216
Adjusted R-squared	0.206378	S.D. dependent var	0.003497
S.E. of refression	0.003115	Akaike info criterion	-8.530796
Sum square resid	0.000437	Schwarz criterion	-8.132958
Log likelihood	249.8623	Hannan-Quinn criter	-8.376555
F-statistic	2.430253	Durbin-Watson stat	1.979785
Prob (F-statistic)	0.020667		

The autocorrelation test is used to determine whether there is a correlation between the confounding error in one period and the confounding error in the previous period in a linear regression model. Durbin Watson value is 1.833181 in the data equation model, which is less than the 4-dU value of 2.5799 but greater than the dU value of

1.7246. (The dL and dU values are derived from the Durbin-Watson table and correspond to the number of samples (n) of 56 and the number of independent variables (k) of 4 (four), indicating that the regression equation model does not exhibit autocorrelation.

Table 7 Autocorrelation Test Result

R-squared	0.493273	Mean dependent var	0.010804
Adjusted R-squared	0.380668	S.D. dependent var	0.006437
S.E. of refression	0.005066	Akaike info criterion	-7.558490
Sum square resid	0.001155	Schwarz criterion	-7.160653
Log likelihood	222.6377	Hannan-Quinn criter	-7.404250
F-statistic	4.380529	Durbin-Watson stat	1.833181
Prob (F-statistic)	0.000262		

Table 8 Durbin Watson

n	k	dL	D-W	dU	4-dU	4-dL
56	4	1.4201	1.833181	1.7246	2.5799	2.2754

5. Statistic Test

The coefficient of determination (R2), the T test (partial), and the F test are the statistical tests used in this study (simultaneous). R2 is 0.493273 based on the test results for the effect of capital adequacy ratio, operating expenses and income, non-performing loans, and loan to deposit ratios on profitability (Return on Assets) at BUKU IV Bank using the fixed effect model. This means that the independent variables in the model can account for 49.33% of the variance, while the remaining 50.67% is accounted for by variables not included in the model. Regarding the T-test, it is known that the capital adequacy ratio variable t-count has a probability of 0.0005 and is 3.3763163. Probability = 5% (0.05), indicating that capital adequacy ratio has a statistically significant effect. Loan to deposit ratio (X2) is known to be -1.464190 with a probability of 0.1501 for tcount variable. Probability >= 5% (0.05) indicates that the loan-to-deposit ratio has no discernible effect. The BOPO variable for tcount has a probability of 0.0207 and is known to be -2.397372. With a probability of 5% (0.05), BOPO has a significant effect on the profitability variable (ROA). It is known that -0.285722 with a probability of 0.7764 is the tcount of the non-performing loan variable. Probability greater than or equal to 5% (0.05) indicates that non-performing loans have no discernible effect on the variable profitability (ROA). However, all dependent variables have an effect on the independent variables simultaneously (Test F).

Table 9 Coefficient Determination Test Result

R-squared	0.493273	Mean dependent var	0.010804
Adjusted R-squared	0.380668	S.D. dependent var	0.006437
S.E. of refression	0.005066	Akaike info criterion	-7.558490
Sum square resid	0.001155	Schwarz criterion	-7.160653
Log likelihood	222.6377	Hannan-Quinn criter	-7.404250
F-statistic	4.380529	Durbin-Watson stat	1.833181
Prob (F-statistic)	0.000262		

Table 10 T-test Result

Variable	t-Statistic	Prob
CAR	3.763163	0.0005
LDR	-1.464190	0.1501
BOPO	-2.397372	0.0207
NPL	-0.285722	0.7764

6. Findings

According to the findings above, it was determined that while the independent variables capital adequacy ratio, operating expenses, and operating income all have a significant effect on profitability (ROA), the independent variables loan to deposit ratio and non-performing loans do not (ROA). However, all independent variables, such as capital adequacy ratio, non-performing loan, BOPO, and loan to deposit ratio, have a significant effect on the dependent variable, namely profitability (ROA) at Indonesian BUKU IV banks.

The independent variable, capital adequacy ratio, has a significant effect on profitability (ROA) in this study because the capital adequacy ratio has a profitability value of 0.0005 0.05. This indicates that changes in the capital adequacy ratio will have a significant impact on the profitability of the business. It may be reclaimed if the company's capital adequacy ratio increases, but this will have a negative effect on the bank's profitability. The obtained research is consistent with Menicucci and Paolucci's[21] findings that profitability is influenced by capital adequacy ratio. The findings of this study are also corroborated by research conducted by Alyousfi and Saha[22] on GCC

[21] *Loc.cit*

[22] *Loc.cit*

banks, Salike and Ao[23], Dietrich and Wanzentied[24], Abbas, Ali, and Ahmad[25], Tan, Floros, and Achor[26], and Schiniotakig[27] on the effect of capital adequacy ratio on profitability. Sari, Syam, and Ulman[28] stated that they support this research because the capital adequacy ratio had a significant impact on profitability during Indonesia's 2008 global financial crisis. However, the study's findings contradict Derbali's[29] assertion that CAR has no discernible effect on profitability. Banks require sufficient capital to mitigate potential risks. Profit and reserve increases have an effect on the amount of CAR. Banks are unable to expand and increase their turnover due to the high reserves required to offset the risk of loss. According to the data obtained, the capital adequacy ratio has increased for five banks, up from seven, that are classified as Book IV banks.

For the other independent variable, loan to deposit ratio, it was determined that the loan to deposit ratio had no significant effect on profitability (return on assets) because the profitability value was 0.1501 > 0.05, indicating that changes in the loan to deposit ratio occurred (return on assets). The lack of effect of LDR on ROA is most likely due to the large asset base of Indonesia's state-owned banks. The second possibility is that Bank Persero derives its revenue not only from interest on loans made to customers, but also from commission-based revenue.

According to each bank's annual report, credit disbursement will decrease in 2020 due to declining demand from debtors and the precautionary principle adopted by customers in response to the Covid 19 pandemic. Additionally, CASA growth that remained strong despite declining credit demand was accompanied by an increase in credit risk as a result of the pandemic's impact. Thus, the LDR may have no effect on ROA. The findings of this study are consistent with those of Menicucci and Paolucci[30]. The findings of this study, however, contradict Alyousfi and Saha[31], Bansal, Singh, Kumar, and Gupta[32], Abbas, Ali, and Ahmad[33], and Tan, Floros, and Achor[34], all of which assert that LDR has a significant effect on profitability. (return on investment). According to the data gathered, the loan to deposit ratio has decreased for six of the seven banks classified as Book IV banks.

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[23] Salike, N. and Ao, B. (2018), Determinants of bank's profitability: role of poor asset quality in Asia", *China Finance Review International*, Vol. 8 No. 2, pp. 216-231

[24] *Loc.cit*

[25] Abbas, F., Ali, S. and Ahmad, M. (2021). Does economic growth affect the relationship between banks' capital, liquidity and profitability: empirical evidence from emerging economies. *Journal of Economic and Administrative Sciences*, *Vol. 2 No. 1*, 120-13

[26] *Loc.cit*

[27] *Loc.cit*

[28] *Loc.cit*

[29] Derbali, A. (2021). Determinants of the performance of Moroccan Banks. *Journal of Business and Socioeconomic Development. Vol. 1, No. 1, 102-117*

[30] *Loc.cit*

[31] *Loc.cit*

[32] Bansal, R., Singh, A., Kumar, S. and Gupta, R. (2018), Evaluating factors of profitability for Indian banking sector: a panel regression, *Asian Journal of Accounting Research*, Vol. 3 No. 2, 236-254

[33] *Loc.cit*

[34] *Loc.cit*

In this study, it was determined that another independent variable, the ratio of operating expenses to operating income, had a significant effect on profitability (return on assets), because the profitability value was 0.0207 0.05, indicating that changes in the ratio of operating expenses to operating income would have a significant effect (return on assets). The findings of this study contradict Derbali's[35] assertion that the operating expense-to-income ratio has no significant effect on profitability (return on assets). However, the findings of this study corroborate those of Dietrich and Wanzentried[36], Nguyen[37], and Schiniotakig[38], who all assert that BOPO has a significant impact on profitability (ROA).

In 2020, banks succeeded in lowering their operating expenses by reducing training costs as a result of Covid-19-related restrictions. Several work plans and promotions were delayed during the pandemic. Banks are increasing their innovation in the direction of digitalization and automation in order to improve operational efficiency and customer service, while also limiting ATM network expansion, as the majority of transactions are now conducted online via internet banking and mobile banking. The decrease in operating income that affects the BOPO ratio also affects the ROA ratio, as the Bank receives less revenue from fees and commissions. For BUKU IV banks, there was a significant decrease in credit card commissions as a result of restrictions on activities outside the home due to the Covid-19 pandemic. According to the data obtained, BOPO increased in 2020 for all seven banks classified as Book IV banks.

Because the profitability value is 0.7764 > 0.05, it can be concluded that non-performing loans have no significant effect on profitability (return on assets) (return on assets). The findings of this study contradict Purnamasari and Mudokir[39] and Sari, Syam, and Ulum[40], who assert that non-performing loans have a significant impact on profitability (return on assets) during economic and global financial crises. According to each bank's annual report, the Covid-19 pandemic impacted both bank profitability and individual banking NPLs. However, the government stimulus related to credit restructuring aided not only customers who were in a difficult situation due to social restrictions and regulations, but also banks in remaining stable. continue to be profitable. Additionally, a well-executed prudential principle and a strict monitoring policy on credit lending with a risk management component assist banks in managing credit risk and overcoming the economic crisis. Additionally, banks diversified their portfolios to promote healthier sector growth, gradually improved asset quality, and tightened collections to account for potential losses. According to the data obtained, non-performing loans have increased for six of the seven banks classified as Book IV banks.

The capital adequacy ratio, operating expenses and income, non-performing loans, and loan to deposit ratios all have a significant effect on profitability (Return On Assets) at Bank Buku IV in 2019-2020, according to this study. In this study, the adjusted

[35] *Loc.cit*
[36] *Loc.cit*
[37] *Loc.cit*
[38] *Loc.cit*
[39] *Loc.cit*
[40] *Loc.cit*

R square (R2) or coefficient of determination is 49.33 percent, indicating that the capital adequacy ratio, operating expenses and income, non-performing loans, and loan to deposit ratios can all be used to explain the independent variables of profitability. (return on investment). This means that the independent variables in the model can account for 49.33% of the variance, while the remaining 50.67% is accounted for by variables not included in the model.

By the given statement from the results of interview with BUKU IV Bank officials, it states that the global and national macro economic conditions are one of the reasons that effects the banking sector returns on assets (ROA). The challenging global economic conditions with the ongoing US-China Trade War triggered a major impact on the Chinese economy and the volatility of the Asian Region from commodity prices. After the US General Election in November 2020, many industrial players took a "wait and see" attitude, waiting and seeing the upcoming policies on trade and capital flows in the region. The health crisis due to the Covid-19 pandemic also put pressure on the global and national economy as well as the handling of the pandemic with the global social situation that creates financial market uncertainty in 2020. People's mobility is greatly reduced until it reaches its lowest point in March-May 2020. The existence of these uncertainty finances has an impact on market conditions and investment behavior of the public. Demand for financial assets that are considered safe has increased substantially, such as government bonds and gold. The precautionary principle that has arisen also has an impact on the demand for credit which is quite low, resulting in credit growth not being as fast as funds growth and the trend of increasing Loan at Risk (LaR) during 2020.

D. CONCLUSION

The findings indicated that while capital adequacy ratio, operating expenses, and operating income all have a significant effect on profitability (ROA), loan to deposit ratio and non-performing loan have the opposite effect. However, all independent variables, including capital adequacy ratio, non-performing loan, BOPO, and loan to deposit ratio, have a statistically significant effect on the dependent variable, which is mean profitability (ROA) at Indonesian BUKU IV banks. To conclude, banks' profitability should be maintained in accordance with the Financial Services Authority's regulations. Credit distribution mechanisms such as working capital credit, investment credit, and consumption credit must be tightened further, particularly during the Covid 19 pandemic, to mitigate the risk of bad loans affecting the company's revenue and expenses, as well as profitability.

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