JBF Journal of Business and Finance
EM in Emerging Markets

Volume 5 (1), 2022, 31-46

DETERMINANTS OF BANK PROFITABILITY IN INDONESIA BASED ON COMMERCIAL BANK BUSINESS ACTIVITIES (BUKU)

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ABSTRACT

This study aims to determine the determinants of the profitability of banks in Indonesia based on the Commercial Group Business Banks (BUKU). Descriptive and verification methods used on secondary form bank that go public in Indonesian Stock Exchange. The dependent variable is Return on Assets (ROA) and the independent variables are Capital Adequacy Ratio (CAR), Loan to Deposit Ratio (LDR), Operational Expense of Operating Income (OEOI) and Net Interest Margin (NIM). The results showed that in BUKU 2, OEOI has a significant negative effect on ROA while CAR and LDR have a negative and insignificant effect on ROA and NIM has a positive and insignificant effect on ROA. In BUKU 3, it showed that CAR has a significant positive effect on ROA, for LDR and NIM has a positive and insignificant effect on ROA while for OEOI it has a negative and insignificant effect on ROA. In BUKU 4, CAR, LDR and ROA have negative and insignificant effect on ROA and NIM have a significant positive effect on ROA. Simultaneously, CAR, LDR, OEOI and NIM have an effect on ROA for Bank BUKU 2,3 and 4.

Keywords : Return on Asset, Capital Adequacy Ratio, Loan to Deposit Ratio, Operating Expense to Operating Income, Net Interest Margin

1. Introduction

1.1. Background

The financial services sector is one of the important pillars in the economy. The banking industry is one part of financial services which controls about 80% of the assets share of the financial services industry in Indonesia (www.bisnis.com) Therefore the banking industry needs to be carefully regulated in maintaining its operational continuity because each bank has the ability different capital. Commercial Bank Business Group (BUKU) based on POJK No. 6 / POJK.03 of 2016 which regulates the business activities of banks and office networks based on core capital. Banks in Indonesia are grouped into four BUKU groups. BUKU 1 is a bank with a core capital of less than one trillion rupiah, BUKU 2 is a bank with a core capital of one trillion to five trillion, BUKU 3 is a bank with a capital of five trillion to thirty trillion rupiah and BUKU 4 is a bank with a core capital of at least thirty trillion rupiah. The number of banks in each BUKU group varies. For the BUKU 1 group the number reaches 44 banks and for the BUKU 4 group there are 6 banks. The banking sector is the backbone of the Indonesia as an emerging market and plays an important role as a financial intermediary. The soundness of bank has an important influence not only for banks also for stakeholders such as central banks, governments and other financial authorities. Information of these factors will be useful in assisting the authorities and banks in formulating policies to increase the profitability of the Indonesia banking sector.

The difference in the number of banks and capital owned between each BUKU group causes competition between banks in each BUKU group of different intensity and besides that currently banks are also faced with challenges with the emergence of financial technology companies and changes in bank business patterns to digital so that it will affect the performance of each bank. One of the benchmarks for a bank's performance is its profitability, which indicator is Return On Assets (ROA). The following is data on a bank's average ROA based on BUKU

Table 1.
ROA, CAR, OEOI, NIM and LDR of Banks Based on BUKU
October 2019 and October 2020 period

	BUKU I		BUKU II		BUKU III		BUKU IV	
	Oct 2019	Oct 2020	Oct 2019	Oct 2020	Oct 2019	Oct 2020	Oct 2019	Oct 2020
ROA	1.24%	-0.19%	1.49%	1.23%	1.89%	1.77%	3.11%	1.96%
CAR	21.64%	21.29%	25.21%	26.62%	25.13%	28.60%	22.37%	21.13%
OEOI	89.33%	102.47%	87.26%	92.04%	88.75%	89.82%	72.97%	82.67%
NIM	4.85%	4.68%	4.78%	4.52%	3.98%	3.51%	5.46%	4.86%
LDR	77.24%	78.80%	86.68%	79.73%	101.38%	88.73%	91.74%	80.37%

Source: Indonesian Banking Statistics, OJK

Based on table 1 above, all bank ROA based on BUKU in October 2020 has decreased compared to October 2019. For Capital Adequacy Ratio (CAR) that has increased in 2020 are BUKU II and BUKU III Banks and for Operational Expenses and Operating Income (OEOI) has increased for all BUKU bank groups. Net Interest Margin (NIM) decreased in 2020 compared to 2019 for all BUKU bank groups. Whereas for LDR, only the BUKU I group experienced an increase in 2020 compared to 2019.

Research literature related to banking performance with profitability indicators includes research conducted by Capraru & Ihnatov (2014) which shows that banks with higher capital adequacy ratios provide better profitability performance. Naceur and Omran (2011) examined the linkage of specific banking characteristics and macroeconomic indicators to banking financial performance. Ahmad Al Harbi (2018) examines that equity, foreign ownership, off balance sheet activities affect banking performance. Ivan et. al. (2018) stated that Non-Performing Loans, Cost Efficiency & Size affect bank profitability. Elisa et. al. (2015) suggests that size, capital ratio, loan ratio, deposit & asset quality affect profitability. Buchory (2016) states that Loan to Deposit Ratio, Operating Expense to Operating Income have a negative and insignificant effect on Return On Assets, Net Interest Margin has a positive and insignificant effect on Return On Assets and Non-Performing Loans have a positive and significant effect on Return On Assets. . Based on the results of this study, there are still different results, so there is a research gap phenomenon from the results of the research that has been done. Based on the background that has been stated, the problems discussed in this study are the determinants of bank profitability in Indonesia based on BUKU.

2. Literature Review

According to the Banking Law Number 10 of 1998, what is meant by a bank is a business entity that collects funds from the public in the form of deposits and distributes them to the public in the form of credit funds or in other forms in order to improve the standard of living of the people at large. Commercial banks are banks that carry out business activities in a conventional fund or based on sharia principles which in their activities provide payment traffic services or commercial banks (Law No.9 / 7 / PBI / 2010). The number of commercial banks in Indonesia in 2020 is 115 banks.

Several studies regarding the performance of banking in Indonesia have been conducted with different results. Nurul, et al (2012) found that CAR and LDR were not significant to ROA while NPL had a significant effect. Ahmad (2015) states that CAR has a negative and insignificant effect on ROA, LDR has a positive but insignificant effect on ROA, OEOI has a negative and significant effect on ROA, NPL has a negative and significant effect on ROA and NIM has a positive and significant effect on ROA. ROA. Research on banking performance in several countries has also previously been conducted with results that still show differences. Shahchera (2012) found that liquid assets have a significant effect on ROA and Gul et al (2011) stated that Loan to Deposit has a significant positive effect on ROA while Capital is not significant to ROA. Profitability is used as a measured a banking performance. Business performance is an important subject matter for academicians, managers, and, most importantly, for entrepreneurs. (Cubin, 2019)

Return on Asset is a ratio used to measure the ability of bank management to generate overall profit. The greater the ROA of a bank, the greater the level of profit achieved by the bank and the better the position of the bank in terms of asset use (Gumanti, 2011)

This study uses capital ratio variables, namely Capital Adequacy Ratio, Operational Efficiency (OEOI), Market Risk (NIM), Liquidity (LDR). Capital Adequacy Ratio (CAR) is a capital ratio that shows the ability of a bank to provide funds for business development and to accommodate risk of loss of funds caused by bank operational activities. CAR shows the extent to which the decline in bank assets can still be covered by the available equity of the bank, the higher the CAR, the better the condition of a bank. Bilal et al (2011) and Francis (2013) in their research results stated that the greater the capital ratio, the higher the ROA. .

Loan to Deposit Ratio (LDR) is a ratio used to determine a bank's ability to repay its obligations to customers who have invested their funds by relying on credit that has been given as a source of liquidity (Dendawijaya, 2005: 116). The higher this ratio, the lower the bank's liquidity capacity so that the possibility of a bank in a problematic condition will be even greater. The results of research from Ayadi & Boujelbene (2012) and Nurul Maulidya, et al (2012) state that LDR has no significant effect on ROA while Gul, et all (2012) and Shahchera (2012) found that there is a strong and positive influence between liquidity and bank profitability.

Operational Efficiency (OEOI) as a measure of operating efficiency aims to measure the ability of a bank's operating income to cover its operational costs. Bank Indonesia sets the BOPO ratio at 90% because if the OEOI ratio exceeds 90% to close to 100%, it means that the bank can be categorized as inefficient in carrying out its operations.

Market risk is the risk from the impact of changes in credit disbursed as a result of economic conditions and the level of competition. Credit risk in several studies is measured using the Net Interest Margin (NIM) variable, the extent to which changes in out standing credit will have an impact on the Net Interest Margin, this ratio used to measure the ability of bank management to manage its productive assets to generate net interest income. The higher the NIM, the more effective the bank is in placing earning assets in the form of credit.

3. Research Method

In this study, research variables are divided into dependent variables, namely profitability consisting of Return On Assets (ROA) and independent variables consisting of Capital Adequacy Ratio (CAR), Loan to Deposit Ratio (LDR), Operating Expense and Operating Income (OEOI) and Net Interest Margin (NIM). The population in this study were all banks in Indonesia with Capital above 1 trillion Rupiah consisting of banks BUKU 2, BUKU 3 and BUKU 4 that have gone public with a sample of 38 banks.

The procedures and methods used in data collection in this study are secondary data. The data analysis method used in this study is multiple linear regression analysis. In multiple linear regression, it is useful to prove whether there is a relationship between two or more independent variables (X) and a dependent variable (Y) or not. The functional relationship between one dependent variable and more than one independent variable can be done with multiple linear regression analysis, where the Share Price is the dependent variable while the Loan to Deposit Ratio (LDR), Return On Asset (ROA), and Price to Book Value (PBV) as an independent variable. This research uses multiple linear regression method. Before testing multiple linear regressions, a data feasibility test was conducted using the classical assumption test which included normality test, multicollinearity test and heteroscedasticity test. Multiple linear regression analysis will be carried out if the number of independent variables is two or more. The multiple linear regression formula is as follows:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4$$

Y = Return On Asset
a = Constant Value, which is the Y value if X = 0
X1 = Capital Adequacy Ratio (CAR)
X2 = Loan to Deposit Ratio (LDR)
X3 = Operating Expenses Operating Income (OEOI)
X4 = Net Interest Margin (NIM)

b = number of direction or regression coefficient
b1 = Return on assets regression coefficient

Correlation coefficient analysis is used to determine the direction and strength of the relationship between two or more variables. Direction is stated in the form of a positive or negative relationship, while the strength or weakness of the relationship is expressed in the magnitude of the correlation coefficient (Sugiyono, 2017: 286). The coefficient of determination is used to determine the influence of the independent variables, namely CAR, LDR, OEOI, and NIM. After that, a partial significance test was carried out (t statistical test) and a simultaneous test (f test).

4. Result and Discussion

Development of Capital Adequacy Ratio (CAR), Loan to Deposit Ratio (LDR), Operational Expense to Operating Income (OEOI), Net Interest Margin (NIM) and Return On Asset (ROA) in banks in Indonesia based on Commercial Bank Business Activities (BUKU), namely BUKU 2, BUKU 3 and BUKU 4 banks listed on the Indonesia Stock Exchange in 2019 are as follows:

Table 2.
CAR, LDR, OEOI, NIM and ROA
Bank BUKU 2, 31 December 2019 (%)

No	Bank	CAR	LDR	OEOI	NIM	ROA
1	Bank Mestika Darma	38.6	88.06	71.48	6.45	2.72
2	Bank J Trust	14.53	48.77	99.92	0.39	0.29
3	Bank Ganesha	34.9	82.76	96.69	4.6	0.32
4	Bank Ina Perdana	37.41	62.94	96.8	3.78	0.23
5	Bank QNB	21.08	84.7	99.4	2.56	0.02
6	Bank Maspion	20.19	94.13	87.1	4.14	1.13
7	Bank Bumi Artha	23.55	87.08	89.55	3.72	0.96
8	Bank Of India Indonesia	45.85	81.69	97.33	4.41	0.6
9	Bank Victoria	17.76	74.48	100.69	1.07	-0.09
10	Bank Oke	41.35	115.57	102.21	2.6	-0.27
11	Bank Artha Graha	18.55	95.59	105.11	4.77	-0.3
12	Bank China Construction	17.52	79.17	26.75	2.26	1.11
13	Bank Nobu	21.72	75.35	93.14	3.93	0.52
14	Bank BRI Agro	24.28	91.59	96.64	3.01	0.31
15	Bank Artos	148.28	111.07	261.1	4.74	-11.27
16	Bank Capital	12.67	60.55	98.12	3.5	0.13
17	Bank Neo Commerce	29.35	94.14	97.24	4.86	0.37
18	Bank MNC	15.16	87.59	95.21	4.17	0.27
19	Bank Panin Syariah	31.43	111.71	99.42	1.19	0.06
	Average	32.33	85.63	100.73	3.48	-0.15
	Max	148.28	115.57	261.1	6.45	2.72
	Min	12.67	48.77	26.75	0.39	-11.27

Source : Processed Data

Based on table 2 for BUKU 2 banks in 2019, the highest Capital Adequacy Ratio (CAR) is Artos Bank at 148.28% because in December 2019 there was a capital deposit from PT. Indonesian Ecosystem Metamorphosis (MEI) of Rp. 504.11 billion and paid up capital from Wealth Track Technology (WTT) of Rp. 178.75 billion and the lowest CAR at 12.67%, namely for the Capital bank and the average CAR for BUKU 2 banks was 32.33% on average in the very soundness category because CAR> 12%. The highest Loan to Deposit Ratio (LDR) is Bank Oke, which is 115.57% and the lowest is J Trust bank at 48.77% and the average LDR for BUKU 2 is 85.63%, which means that on average with BI Circular No. 6/23 / DPNP / 2011 concerning the soundness of a bank, the bank is in a acceptable condition. For Operational Expenses, the highest Operating Income (OEOI) is Bank Artos, which is 261.1% and the lowest is Bank China Construction, which is 26.75% and the average BOPO for BUKU 2 is 100.73%, which means that on average unsanitary conditions. For BUKU 2 bank's Net Interest Margin (NIM), the highest was Mestika Darma bank, which was 6.45% and the lowest was J Trust bank at 0.39% and on average, BUKU 2 bank NIM was 3.48% which means average in very sound condition. For Return On Asset (ROA), the highest is Bank Mestika Darma, which is 2.72% and the lowest is Artos bank, which is -11.27% and the average ROA for BUKU 2 banks is -0.15%, which means ROA was poor condition.

Table 3.
CAR, LDR, OEOI, NIM and ROA
Bank BUKU 3, 31 December 2019 (%)

No	Bank	CAR	LDR	OEOI	NIM	ROA
1	Bank Bukopin	12.59	84.82	98.98	2.08	0.13
2	Bank BTN	19.34	93.19	91.61	3.06	0.69
3	Bank BJB	17.71	96.07	84.23	5.75	1.68
4	Bank Jatim	21.77	63.34	71.4	6.11	2.75
5	May Bank	21.38	94.13	87.09	5.07	1.45
6	Bank Permata	19.9	86.3	97	4.4	1.3
7	Bank Sinar Mas	17.32	81.95	119.43	7.31	0.23
8	Bank BTPN Syariah	44.6	95.3	58.1	9.1	13.6
9	Bank Mayapada	16.18	93.34	92.16	3.61	0.78
10	Bank Mega	23.68	69.67	74.1	4.9	2.9
11	Bank OCBC NISP	19.17	94.08	74.77	3.96	2.22
12	Bank Woori Saudara	20.02	139.91	75.75	3.4	1.88
	Average	21.14	91.01	85.39	4.90	2.47
	Min	12.59	63.34	58.1	2.08	0.13
	Max	44.6	139.91	119.43	9.1	13.6

Source : Processed Data

Based on table 3 for BUKU 3 banks in 2019, the highest Capital Adequacy Ratio (CAR) is for BTPN Syariah Bank at 44.6% and the lowest CAR at 12.59%, namely Bukopin bank and on average the CAR for BUKU 3 banks is equal to 21.14% on average in very healthy category because CAR> 12%. For Loan to Deposit Ratio (LDR), the highest is Woori Saudara Bank, which is 139.91% and the lowest is East Java bank at 63.34% and the average LDR for BUKU 3 is 91.01%, which means that the average is in accordance with with BI Circular No. 6/23 / DPNP / 2011 concerning the soundness of a bank, the bank is in a fairly healthy condition. For Operating Expenses, the highest Operating Income (BOPO) is Sinar Mas Bank, which is 119.43% and the lowest is Bank BTPN Syariah which is 58.1% and the

average OEOI for BUKU 3 is 85.39% which means that on average average in soundness condition. For the Net Interest Margin (NIM) of BUKU 3 banks, the highest was BTPN Syariah at 9.1% and the lowest was Bukopin at 2.08% and on average, BUKU 3 bank NIM was 4.90%, which means that on average - on average in very healthy condition. For Return On Asset (ROA), the highest is Bank BTPN Syariah, which is 13.6% and the lowest is Bukopin, which is 0.13% and the average ROA for BUKU 3 banks is 2.46%, which means that on average average for his ROA in very good condition.

Table 4.
CAR, LDR,OEOI, NIM and ROA data
Bank BUKU 4, 31 December 2019 (%)

No	Nama Bank	CAR	LDR	OEOI	NIM	ROA
1	BTPN	24.2	163.1	84	6.9	2.3
2	BCA	23.8	80.5	59.1	6.2	4
3	Bank Niaga	21.47	97.75	82.44	5.31	1.86
4	Bank BRI	21.52	88.64	70.1	6.98	3.5
5	Mandiri	22.6	82.95	67.44	5.48	3.03
6	BNI	19.7	91.5	73.2	4.9	2.4
7	Danamon	24.2	98.9	82.7	8.3	3
	Average	22.5	100.5	74.1	6.3	2.9
	Max	24.2	163.1	84	8.3	4
	Min	19.7	80.5	59.1	4.9	1.86

Source : Processed Data

Based on table 4 for BUKU 4 banks in 2019, the highest Capital Adequacy Ratio (CAR) was Bank Danamon at 24.2% and the lowest CAR at 19.7%, namely BNI bank and the average CAR for BUKU 4 banks was 22 , 5% on average in very healthy category because CAR> 12%. For the Loan to Deposit Ratio (LDR), the highest was Bank BTPN at 163.1% and the lowest was BCA bank at 80.5% and the average LDR for BUKU 4 was 100.48%, which means that on average it corresponds to BI Circular No. 6/23 / DPNP / 2011 concerning the soundness of a bank, the bank is in an unsoundness condition. For Operating Expenses Operating Income (OEOI), the highest was Bank BTPN at 84% and the lowest was Bank BCA at 59.1% and the average OEOI for BUKU 4 was 74.14%, which means that on average it is in very healthy condition. . For BUKU 4 bank's Net Interest Margin (NIM), the highest was Danamon bank, which was 8.3% and the lowest was BNI bank at 4.9% and on average, BUKU 4 bank NIM was 6.3%, which means that on average average in very healthy condition. For Return On Asset (ROA), the highest is BCA Bank, which is 4% and the lowest is CIMB Niaga, which is 1.86% and the average ROA for BUKU 4 banks is 2.87%, which means that on average for The ROA is in very soundness bank.

Table 5.
Multiple Regression Bank BUKU 2

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	5.414	1.310		4.132	0.001		
	CAR	-0.027	0.023	-0.176	-1.183	0.257	0.287	3.480
	LDR	-0.002	0.015	-0.010	-.108	0.916	0.747	1.338
	BOPO	-0.054	0.009	-0.823	-6.205	0.000	0.361	2.767
	NIM	0.225	0.161	0.123	1.398	0.184	0.824	1.213

a. Dependent Variable: ROA

The multiple linear regression equation for Bank BUKU 2 is as follows:

$$Y = 5{,}414 - 0.027(X1) - 0.002(X2) - 0.054(X3) + 0.025(X4)$$

a. 5,414 means that if the CAR, LDR, OEOI and NIM variables are worth 0, then the Y (ROA) variable will be worth 5,414.
b. -0.027 means that if CAR (X1) increases by one unit and the other variables are constant, then variable Y will decrease by -0.027.
c. - 0.002 means that if LDR (X2) increases by one unit and the other variables are constant, then variable Y will decrease by 0.002.
d. -0.054 means that if BOPO (X3) increases by one unit and the other variables are constant, then the Y variable will decrease by -0.054.
e. 0.025 means that if the NIM (X4) increases by one unit and the other variables are constant, then the Y variable will increase by 0.025.

Table 6.
Correlation Coefficient of Determination: Model Summary

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.954[a]	.911	.885	.93971	1.498

a. Predictors: (Constant), NIM, OEOI, LDR, CAR

b. Dependent Variable: ROA

The results of the calculation in table 6 show that the amount of R Square is 0.911 which means that in BUKU 2 bank, Return On Asset is influenced by CAR, LDR, OEOI and NIM of 91.1% and the rest is influenced by other factors outside of this research model.

The results in table 5 can be explained for the significance test at BUKU 2 bank as follows:
1. From the results of the calculation of CAR with a partial test, it is found that the tcount is -1.183 with a significance of 0.257. The significance value is above 0.05, which indicates

that the CAR variable has a negative and insignificant effect on ROA. This result is in accordance with the results of research from Purwoko et al, 2013 and Somjit, 2013 but contradicts the results of research from Artarina et al. 2013 and Sinha et al., 2014.

2. From the results of the calculation of the LDR with a partial test, it is found that the tcount is -0.108 with a significance of 0.916. The significance value is above 0.05 which indicates that the LDR variable has a negative and insignificant effect on ROA. This result is in accordance with the results of research from Purwoko et al. 2013 but contradicts the results of research from Artarina et al., 2013.
3. From the results of the calculation of OEOI with a partial test, it is found that the tcount is -6.205 with a significance of 0.000. The significance value is below 0.05 which indicates that the OEOI variable has a significant negative effect on ROA. This result is in accordance with the results of research from Purwoko et al, 2013 and Chatarine et al, 2014 but contrary to the results of research from Sinha et al, 2014.
4. From the results of the calculation of NIM with a partial test, it is found that the tcount is 1.398 with a significance of 0.138. The significance value is above 0.05 which indicates that the NIM variable has a positive and insignificant effect on ROA. This result contradicts the results of research from Purwoko et, al (2013) and Setiawan (2017).

Table 7.
Simultaneous Test Results (F-test)

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	126.407	4	31.602	35.787	.000[b]
	Residual	12.363	14	.883		
	Total	138.770	18			

a. Dependent Variable: ROA

b. Predictors: (Constant), NIM, OEOI, LDR, CAR

Based on table 7, it can be seen that the results of CAR, LDR, OEOI and NIM with the simultaneous test show that Fcount is 35.787 with a significance of 0.000. The significance value is below 0.05 which indicates that the CAR, LDR, OEOI and NIM variables have a significant effect simultaneously or together on profitability (ROA). These results are in line with the results of research from Buchory (2016) and Purwoko et al (2013).

Tabel 8.
Multiple Regression Bank BUKU 3

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-5.005	3.571		-1.401	0.204		
	CAR	0.412	0.083	0.901	4.932	0.002	0.199	5.031
	LDR	0.003	0.017	0.014	0.154	0.882	0.861	1.162
	OEOI	-0.019	0.028	-0.086	-0.685	0.515	0.422	2.367
	NIM	0.038	0.268	0.020	0.141	0.892	0.316	3.162

a. Dependent Variable: ROA

Source: Processed Data

The multiple linear regression equation for Bank BUKU 3 is as follows:

$$Y = -5.005 + 0.412 (X1) + 0.003 (X2) -0.019 (X3) + 0.038 (X4)$$

The meaning of the BUKU 3 Bank regression equation is as follows:

a. -5.005 means that if the CAR, LDR, OEOI and NIM variables are 0, then the Y (ROA) variable will be -5.005.
b. 0.412 means that if CAR (X1) increases by one unit and the other variables are constant, then variable Y will increase by 0.412.
c. 0.003 means that if LDR (X2) increases by one unit and the other variables are constant, then variable Y will increase by 0.003.
d. -0.019 means that if OEOI (X3) increases by one unit and the other variables are constant, then the Y variable will decrease by -0.019.
e. 0.038 means that if the NIM (X4) increases by one unit and the other variables are constant, then the Y variable will increase by 0.038.

Table 9.
Results of BUKU Bank Determination Coefficients 3
Model Summary b

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.976[a]	.954	.927	.97804	2.126

a. Predictors: (Constant), NIM, LDR, OEOI, CAR

b. Dependent Variable: ROA

The results of the calculation in table 9 show that the R Square is 0.954 which means that in BUKU 3 bank, Return On Asset is influenced by CAR, LDR, OEOI and NIM of 95.4% and the rest is influenced by other factors outside of this research model.

The results in table 8 can be explained for the significance test at BUKU 2 bank as follows

1. From the calculation of the Capital Adequacy Ratio with a partial test, it is found that the tcount is 4,932 with a significance of 0.002. The significance value is below 0.05, which indicates that the Capital Adequacy Ratio variable has a significant positive effect on Return on Assets. These results are the same as the results of research from Artharina et al, 2014 but contradict the results of research from Purwoko et al., 2013
2. From the calculation of the Loan to Deposit Ratio with a partial test, it is found that the tcount is 0.154 with a significance of 0.882. The significance value is above 0.05, which indicates that the Loan to Deposit Ratio variable has no significant effect on Return on Assets. This result is in line with the results of research from Purwoko et al, 2013 but contradicts the results of Artharina et al., 2014.
3. From the calculation of the Operational Expense and Operating Income Ratio with a partial test, it is found that the tcount is -0.685 with a significance of 0.515. The significance value is above 0.05 which indicates that the OEOI variable has a negative and insignificant effect on Return On Assets. This result is in accordance with the results of research from Purwoko et al, 2013 and Chatarine et al, 2014 but contrary to the results of research from Sinha et al., 2014
4. From the results of the calculation of the Net Interest Margin Ratio with a partial test, it is found that the tcount is 0.141 with a significance of 0.892. The significance value is above 0.05, which indicates that the NIM variable has a positive and insignificant effect on Return On Assets. This result contradicts the results of research from Purwoko et, al (2013) and Setiawan (2017).

Table 10.
BUKU Bank F Test Results 3

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	126.407	4	31.602	35.787	0.000[b]
	Residual	12.363	14	0.883		
	Total	138.770	18			

a. Dependent Variable: ROA

b. Predictors: (Constant), NIM, OEOI, LDR, CAR

Source: Processed Data

Based on table 10, it can be seen that the results of CAR, LDR, OEOI and NIM with the simultaneous test show that Fcount is 35.787 with a significance of 0.000. The significance value is below 0.05 which indicates that the CAR, LDR, OEOI and NIM variables have a significant effect simultaneously or together on profitability (ROA). These results are in line with the results of research from Buchory (2016) and Purwoko et al (2013).

Table 11.
Results of Multiple Linear Regression for BUKU Banks 4 Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	6.423	.270		23.749	.002		
	CAR	-.017	.013	-.038	-1.307	.321	.360	2.775
	LDR	.000	.001	-.016	-.595	.612	.407	2.456
	OEOI	-.078	.002	-.983	-36.512	.001	.426	2.350
	NIM	.415	.017	.666	24.179	.002	.407	2.459

a. Dependent Variable: ROA

The multiple linear regression equation for Bank BUKU 4 is as follows:

Y = 6.423 - 0.17 (X1) + 0.000 (X2) -0.078 (X3) + 0.415 (X4)

The meaning of the BUKU 2 Bank regression equation is as follows:
1. 6.423 means that if the CAR, LDR, OEOI and NIM variables are worth 0, then the Y (ROA) variable will be worth 6.423.
2. -0.17 means that if CAR (X1) increases by one unit and the other variables are constant, then variable Y will decrease by 0.17.
3. 0,000 means that if the LDR (X2) increases by one unit and the other variables are constant, then the Y variable will increase by 0,000.
4. -0.078 means that if OEOI (X3) increases by one unit and the other variables are constant, then variable Y will decrease by -0.078.
5. 0.415 means that if NIM (X4) increases by one unit and the other variables are constant, then variable Y will increase by 0.415.

Table 12.
Correlation Coefficient and Coefficient Determination

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	1.000[a]	0.999	0.998	0.03183	1.074

a. Predictors: (Constant), NIM, LDR, OEOI, CAR

b. Dependent Variable: ROA

The results of the above calculations also show the amount of R Square of 0.999, which means that at BUKU 4 bank, Return On Asset is influenced by the Loan to Deposit Ratio, Net Interest Margin, Capital Adequacy Ratio and Operating Expenses Operating Income of 99.9% and the rest is influenced by factors other than this research model.

The results in table 11 can be explained as follows:
1. From the calculation of the Capital Adequacy Ratio with a partial test, it is found that the tcount is -1.307 with a significance of 0.321. The significance value is above 0.05, which indicates that the Capital Adequacy Ratio variable has a negative and insignificant effect

on Return On Assets. This occurs because of the regulation from Bank Indonesia regarding CAR which states that the CAR for commercial banks is at least 8%. This result is in accordance with the results of research from Purwoko et al, 2013 and Somjit, 2013 but contradicts the results of research from Artarina et al. 2013 and Sinha et al., 2014.

2. From the calculation of the Loan to Deposit Ratio with a partial test, it is found that the tcount is -0.595 with a significance of 0.612. The significance value is above 0.05, which indicates that the Loan to Deposit Ratio variable does not have a significant effect on Return On Assets. These results are in accordance with the results of research from Purwoko et al, 2013 but contrary to the results of research from Artarina et al., 2013.
3. From the results of the calculation of Operational Income Operating Expenses by partial test, it is found that the tcount is -36.512 with a significance of 0.001 which indicates that the OEOI variable has a significant negative effect on Return On Assets. This result is in accordance with the results of research from Purwoko et al, 2013 and Chatarine et al, 2014 but contradicts the results of research from Sinha et al, 2014.
4. From the results of the calculation of Net Interest Margin with a partial test, it is found that the tcount is 24.179 with a significance of 0.002. The significance value is below 0.05, which indicates that the Net Interest Margin variable has a significant effect on Return On Assets. This result is in line with the results of research from Purwoko et, al (2013) and Setiawan (2017).

Table 13.
BUKU Bank 4 F Test Results

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.280	4	0.820	809.434	0.001[b]
	Residual	.002	2	0.001		
	Total	3.282	6			

a. Dependent Variable: ROA

b. Predictors: (Constant), NIM, LDR, OEOI, CAR

Based on table 13 its explain that the results of CAR, LDR, OEOI and NIM with the simultaneous test show that Fcount is 809.434 with a significance of 0.001. The significance value is below 0.05 which indicates that the CAR, LDR, BOPO and NIM variables have a significant effect simultaneously or together on profitability (ROA). These results are in line with the results of research from Buchory (2016) and Purwoko et al (2013).

5. Conclusions

Based on the results of the research discussion, it can be concluded that in BUKU 2 , OEOI has a significant negative effect on ROA while CAR and, LDR have a negative and insignificant effect on ROA and NIM has a positive and insignificant effect on ROA. In BUKU 3 bank, it can be concluded that CAR has a significant positive effect on ROA, for LDR and NIM has a positive and insignificant effect on ROA while for OEOI it has a negative and insignificant effect on ROA. In BUKU 4 bank for CAR, LDR and ROA have negative and insignificant effect on ROA and NIM have a significant positive effect on ROA. Simultaneously, CAR, LDR, OEOI and NIM have an effect on ROA for Bank BUKU 2,3 and 4.

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