

## What Factors determinan on ROA Rural Bank Owned By Local Government in Indonesia?

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### ABSTRACT

**Purpose** – This research conducted to determine the factors that affect profitability Rural Bank Owned by Local Government in Indonesia. As we know, the establishment of BUMD aims to make a profit, but unfortunately there are still BUMD's that record losses in 2022, especially in Rural Banks. Therefore, researchers want to know what factors influence ROA of Rural Bank Owned by local Government in Indonesia.

**Methodology/approach** – by using data panel regression analysis the researcher wanted to test the factors that affect on ROA of Rural Bank Owned by Local Government in Indonesia. The data was from 64 Rural Bank financial report in 2019 to 2022.

**Findings** – It The result is the factor that has a very positive effect on ROA is LDR, The next factor that has a significant and negative effect is BOPO, while other factor that have no effect on ROA in Rural Bank Owned by Local Governmen in Indonesia are CAR and NPL.

**Novelty/value** – So far, research has been conducted to examine what factors that influence profitability in Commercial Banks. In this research, we would like to present what factors affect ROA at Rural Bank Owned by Regency government in Indonesia from 2019 to 2022.

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### INTRODUCTION

BUMD is a business units established by the Regional Government and Regency Government where all capital is owned by one government or whose capital consists of shares owned by at least one regional government by 51%. One type of BUMD bussines is Rural Bank (Peraturan Pemerintah Nomor 54, Badan Usaha Milik Daerah, 2017).

Based on data from the Ministry of Home Affairs, until the end of December 2022 there were 212 Rural Banks in Indonesia owned by local governments. As many as 13.68% of BPRs posted losses in the 2022 financial year. this is certainly not in line with the vision and mission of BPRs owned by regency government as stipulated in the Minister of Home Affairs Regulation concerning the management of BPRs where one of the intended objectives is to earn profits(Kementerian Dalam Negeri, 2017).

To measure the profit ability on a banks is the Return on Assets which is generally used in many banks. Empirical studies state that there are several factors that influence Return on Assets, including the Capital Adequacy (CAR), Loan to Deposit (LDR), Cost to Operating Income (BOPO) and Non Perform Loans (NPL's).

The first factor is the Capital Adequacy (CAR), The results of studies conducted by Sparta (2017) concluding that this factor has a negative effect to Regional Development Banks. But Panji Maulana, Sany Dwita, Nayang Helmayunita (2021) concluding that CAR does'nt affect to ROA Commercial Banks in Indonesia for period 2017 to 2019.

The second factor is the Loan To Deposit (LDR), from research of Subandi (2013) concluded that LDRs has a weak effect on financial performance and also LDR does'nt a significant affect on ROA. But research by Ade Onny Siagian (2021) and Yeni Siti Halimatus Sa'diyah, Muhammad Umar Mai and Rosma Pakpahan (2021) concluded diferently, they say that this factor has a significant effect on ROA with a positive corelations.

The third factor is cost to Operating Income (BOPO). From research by Dyah Rosna Yustani Toin (2014) found that Conventional Banks are better than Islamic Banks in terms of effectiveness ass seen from the BOPO ratio. Yeni Siti Halimatus Sa'diyah, Muhammad Umar Mai and Rosma Pakpahan (2021) and Panji Maulana, Sany Dwita, Nayang Helmayunita (2021) concluded that BOPO has a very significant effect on ROA with negative corelations. This result is deferent with research by Eti Rohimah (2021) and Muhammad Alfian, Aliyah Pratiwi (2021), concluded that BOPO has no effect to ROA.

The fourth factor that affects ROA is Non-Performing Loans or NPL. According to research from Romauli Nainggolan, Dyah Wulan Sari, and Wasiaturrahma (2022) this factor has a negative and significant effect on ROA. Meanwhile Rohimah (2021) concludes that this factor has no effect on ROA.

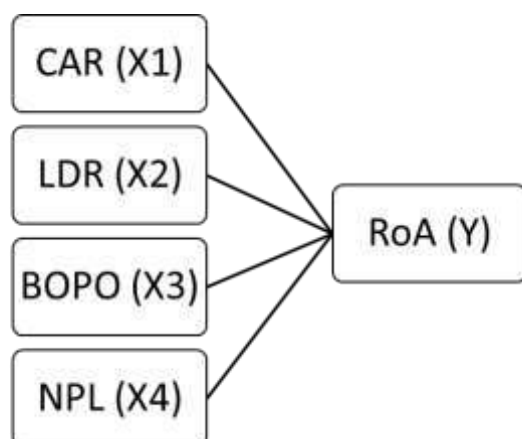
Previous studies were generally at BUMN Banks, National Private Commercial Banks or a mixture of BUMN and BUSN listed in IDX. There are small Accordance with applicable regulations, business activities at Conventional Banks or Sharia Banks are different with rural bank. Conventional bank and sharia bank is wider coverage in services, such as collecting funds and channeling funds. Conventional banks and Islamic banks also serve payment traffic. So that the types of income of conventional banks or islamic banks are wider when compared to rural bank. So it is necessary to update the research on the factors that influence Return on Assets (ROA) in the banking industry, especially in Rural Bank Owned by Regency Government where the rural bank income comes just from raising funds through savings and deposits and channeling funds through credit .

In addition, inconsistencies were found between the results of the studies that had been carried out. Therefore the researcher wants to re-examine the factors that influence Return On Assets (ROA) of rural bank Owned by local Governments in Indonesia for the period 2019 to 2022.

## **LITERATURE REVIEW**

ROA at a bank can be influenced by capital adequacy or CAR, the higher capital, the more better the bank's ability to bear risk of credit/earning assets at risk. If the capiral adequcy value is high, the bank is able to finance operational activities and contribute quite a lot to profitability conducted by Jannati Tanggisalu, Rusdiah Hasanuddin, Yusriadi Hala, Nurlina, and Syahrul Syahrul (2020). Research conducted Dyah Rosna Yustani Toin (2014) regarding the comparative performance of conventional banks and Islamic banks, concluded that there was no difference between the performance of conventional banks and Islamic banks when associated with their capital adequacy ratio (CAR). Other research by Sparta (2017) concluded that the financial performance of regional development banks is negatively affected by CAR, it mean that if the value of CAR increase than the ROA will be decrease.

Previous studies were generally carried out at state-owned banks, private banks, or a mixture of BUMN and BUSN which were listed on the IDX. This means that empirical research on the factors affecting the ROA of the banking sector is dominated by banks with a fairly large Bank Size, in contrast to local government-owned BPRs, which until now have not had an Initial Public Offering (IPO) on the stock exchange floor in Indonesia. There is very little empirical research found on the factors that influence ROA in BPRs in Indonesia, besides that the weakness of previous studies is the small number of samples, so it can potentially not be generalized. In addition, previous research used panel data with the SPSS application analysis tool, which might result in biased research.



- H1 : The Capital Adequacy affects the ROA at Rural Bank Owned by local Government  
 H2 : The Loan to Deposit affects the ROA at Rural Bank Owned by local Government  
 H3 : The cost to Operating Income affects the ROA at Rural Bank Owned by local Government  
 H4 : The Non-Performing Loan affects the ROA at Rural bank Owned by local Government

## METHOD

To explain the problems mentioned above, the research method used is the quantitative research method using data panel regression analysis. The population in this study were 212 rural bank owned by Regional Government in all regions of Indonesia. The sample used is 64 financial statements of rural banks which routinely submit reports to the OJK from 2019 to 2022. The sampling technique used is purposive sampling.

From the financial reports of rural banks from 2019 to 2022 published by OJK, financial ratios were compiled which were then processed using the Eviews application for data panel regression analysis. To test the feasibility of the model, we use Multicollinearity Test.

In data panel regression analysis, its use 4 (four) step (1) choosing models, (2) classical assumptions test, (3) model fit test, and (4) interpretation. In choosing models, there are several test to choose what models is best to use, there are chow test, hausman test and ML test.

## RESULT

### Description of Sample

Based on (Peraturan Pemerintah Nomor 54, Badan Usaha Milik Daerah, 2017), BUMD consists of PERUMDA and PERSERODA. The sample used in this research are 64 Rural Credit Banks with PERUMDA and PERSERODA legal entities spread throughout Indonesia.

### Statistical description

**Table1.** shows the statistical description of the research variables. ROA at the Rural Banks Owned by Regency Government are varies every year. The lowest ROA occurred at PERUMDA BPR Bank Brebes owned by Brebes Regency in Central Java province, which was -0,98% in 2020. Meanwhile, the highest ROA was recorded by PERUMDA BPR Bank Sumedang owned by Sumedang regency in West Java Province amount 6,08% in 2022. the average Return On Assets is 2.64%, this shows that the ability of BPRs owned by local government profitability still quite low.

For the capital ratio represented by the capital adequacy, the lowest value occurs at PERUMDA BPR Bank Blora Artha owned by Blora Regency in Central Java Province, around 14.31% in 2021. Meanwhile, the highest CAR occurred in PT. BPR Tugu Artha (PERSERODA) owned by Malang City government East Java Province with a ratio of 94,81% in 2020. During the observation year, from 2019 to 2022 in 64 Rural Bank Owned by Regency Government, the average ratio CAR of 32,22%. This shows that the ability of rural banks owned by Regency/City Governments is quite high, in accordance with the provisions stipulated by the OJK, which is at least 12%.

**Table1.** show that on average loan to deposit is about 76,12%. In theory, the greater the Loan to Deposit, the higher the Bank's profit, with an increase in Bank profits, the Bank's performance also increases, so the size of a Bank's LDR ratio will affect the Bank's performance. The BOPO ratio shows the company's ability in bank efficiency, from table 3 it can be seen that the BOPO is 81,69% in average. this shows that rural banks are less efficient in managing operational expenses. and finally, the average NPL ratio of 5,27% indicates that rural bank good to manage loans.

**Table 1.** Statistical Descriotion

Sample: 2019 2022

	X1 (CAR)	X2 (LDR)	X3 (BOPO)	X4 (NPL)	Y (ROA)
Mean	32.33121	76.12488	81.69293	5.277813	2.643516
Median	28.51500	77.97500	81.61500	3.945000	2.520000
Maximum	94.81000	94.94000	105.2700	20.65000	6.080000
Minimum	14.41000	38.61000	63.30000	0.190000	-0.980000
Std. Dev.	15.05822	10.34537	7.230206	3.962142	1.186971
Skewness	1.942572	-0.789654	0.204008	1.519264	0.330742
Kurtosis	6.920196	3.271731	3.145949	5.344277	3.366072
Jarque-Bera Probability	324.9309 0.000000	27.39254 0.000001	2.002929 0.367341	157.1017 0.000000	6.096751 0.047436
Sum	8276.790	19487.97	20913.39	1351.120	676.7400
Sum Sq. Dev.	57821.21	27291.80	13330.35	4003.134	359.2698
Observations	256	256	256	256	256

### Choosing Models

In this research, to choose a models like Fixed Effect, Common Effect and Random Effect it use Chow, Hausman and LM Test.

**Table 2.** Recap of test

Name Of Test	Result	Concussion
Chow Test	0.0000	Fixed Effect Model
Hausman Test	0.5440	Random Effect Model
Langrange Multiplier Test	0.000	Random Effect Model

Based on table 2, this research used Random Effect Model

### Classic assumption test

Widarjono (Sakti, 2018, hal. 7) calsic assumption test is unnecessary use if the model is Random Effect model. But to be eligible in Best Linear Unbias Estimator (BLUE), in this research it use Multikolinearity test in detail which independent variables are strongly correlated.

**Table 3.** Multikolinearity Test

	X1	X2	X3	X4
X1	1.000000			
X2	-0.138169	1.000000		
X3	-0.098134	-0.040370	1.000000	
X4	0.091010	-0.343238	0.239039	1.000000

From **table 3**, all of pairwis independent variable are not greater than 0.85. So the conclusion there are no multikolinearity in this model.

**Fit Model Test****Table 4.** F Test

Weighted Statistics			
Root MSE	0.291187	R-squared	0.792035
Mean dependent var	0.706509	Adjusted R-squared	0.788721
S.D. dependent var	0.640214	S.E. of regression	0.294275
Sum squared resid	21.73600	F-statistic	238.9841
Durbin-Watson stat	1.482189	Prob(F-statistic)	0.000000

Based on **table 4**, it can be seen that Prob. Value 0.0000 less than 0,05. This means that capital adequacy, loan to deposit, cost to operational income and non-perform loan simultaneously effect on ROA.

**Table 5.** t Test

Dependent Variable: Y				
Method: Panel EGLS (Cross-section random effects)				
Sample: 2019 2022				
Periods included: 4				
Cross-sections included: 64				
Total panel (balanced) observations: 256				
Swamy and Arora estimator of component variances				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
X1	0.002018	0.003226	0.625661	0.5321
X2	0.011449	0.003981	2.875789	0.0044
X3	-0.141610	0.004896	-28.92384	0.0000
X4	-0.013040	0.009045	-1.441754	0.1506
C	13.34405	0.590094	22.61344	0.0000

Result from Table5 show us : Variable X1 show Prob. value 0.5321 greater than 0.05, its mean that X1 does not have significant influence to Y. Variabel X2 show Prob. value 0.0044 less than 0.05. its mean that X2 does have significant influence to Y with positif relations. Variabel X3 show Prob. Value 0.0000 less than 0.05 its mean that X3 does have significant influence to Y with negatif relation. Variabel X4 show Prob. value 0.1506 greater than 0.05 its means that X4 does not have significant influence to Y

**Table 6.** Coefficient Determinations

Weighted Statistics			
Root MSE	0.291387	R-squared	0.792035
Mean dependent var	0.706509	Adjusted R-squared	<b>0.788721</b>
S.D. dependent var	0.640214	S.E. of regression	0.294275
Sum squared resid	21.73600	F-statistic	238.9841
Durbin-Watson stat	1.482389	Prob(F-statistic)	0.000000

Table 6 show us coefficient determinations of X1,X2,X3 and X4. Value of Adjusted R Square is 0.7885 or 78,87%. Its meant that all of independen variable can explain dependen variable (Y). The rest 21,13% are other variable that not include in this research.

## DISCUSSION

Prob. Value the value of variable X1 (CAR) is smaller than 0.05 so that its no significan affect from X1 (CAR) to Y (ROA). Higher CAR show that capital value is almost as same as the value of risk weighted asset. Higher CAR commonly happens in rural banks that newly opened/operation. This results are accordance with (Wulandari et al., 2016) (Suwandi & Oetomo, 2017) (Azmy et al., 2019) (Tangngisalu et al., 2020) (Anggawulan & Suardikha, 2021) (Panji Maulana, Sany Dwita, 2021) (Dewanti et al., 2022)

Prob. Value of variable X2 (LDR) less than 0.05 so that it can be concluded that theres a significant affect X2 (LDR) to var. Y (ROA) with a positif realtions. On operasiotional aspect, rural bank are really depend on ththird party found. This results are supported by (Wulandari et al., 2016) (Suwandi & Oetomo, 2017) (Azmy et al., 2019) (Siagian, 2021) (Kasanah et al., 2022).

Prob. Value of variable X3 (BOPO) is less than 0.05 so it can be concluded that theres a significant effect of X3 (BOPO) to var. Y (ROA) with negatif ralations. Its mean that every time BOPO decreases, than ROA will increases. (Suwandi & Oetomo, 2017) (Azmy et al., 2019) (Sitompul & Nasution, 2019) (Dwi Kumala Safitri Agam, 2021) (Panji Maulana, Sany Dwita, 2021) (Pratama, 2021) (Dewanti et al., 2022) concluded the same thing

Prob. Value the value of variable X4 (NPL) is greater than 0.05 so it can be concluded that theres no influence var. X4 (NPL) to var. Y (ROA). if non-performing loans increase in lending it will not result in losses. If bad cradit happens on bank, it will not strightly decrease the profit. This research conclutions supported by (Azmy et al., 2019) (Rembet & Baramuli, 2020)(Pratama, 2021)(Anggawulan & Suardikha, 2021).

## CONCLUTIONS

This research was to examine factor that influence ROA such CAR, LDR, BOPO and NPL in Rural Banks Owned by local goverment in Indonesia. The result is that LDR have significant effect on ROA with positif realtions, BOPO have significant effect on ROA with negatif corelations, while CAR and NPL have no effect on ROA. Future research includes, what external factors that significantly effect on ROA Rural Bank such as Interest, Inflations and many other thing.

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