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# THE EFFECTS OF NIM, LDR AND BOPO ON BALINESE PEOPLE'S CREDIT BANK (BPR) PROFITABILITY OF TABANAN

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**ABSTRACT**: Risks that are inseparable from banking operations make Banks, especially BPRs have to pay attention to the soundness of the bank, both in terms of credit, liquidity and efficiency. The purpose of this study was to known the effect of NIM, LDR and BOPO on the profitability of BPR in Tabanan. The research method used was purposive sampling and obtained a sample of 40. The results of this study indicate that NIM has a positive effect on profitability, LDR has no effect on profitability, while BOPO has a negative effect on profitability. BPRs can maintain the soundness level of banks by paying attention to efficiency bank operations so as not to have a negative impact on BPR profitability.

### KEYWORDS : NIM, LDR, BOPO and Profitability

## I. INTRODUCTION

The development of the world economy cannot be separated from various factors. One of the sectors that helps develop the economy in a country is the banking sector. Seeing Law no. 10 of 1998 regarding banking, states that a bank is a business entity that collects funds from the public in the form of savings and distributes them back to the public in the form of credit and other forms with the aim of improving the standard of living of the people at large.

The banking sector in general is a sector that is quite vulnerable to risk because the banking sector manages public funds in terms of credit, purchase of securities and other investments. Banks are companies engaged in the financial sector, in the sense that all banking activities are always related to the financial sector so that they will not be separated from financial problems (Kasmir, 2012: 24).

Based on Law No.10 of 1998, banks can be divided into two types, namely commercial banks and rural banks. Commercial banks are banks that carry out their business activities conventionally or sharia so that in their activities they can provide services to payment traffic. These services are general in nature, meaning that they can provide all existing banking services. Commercial banks also function as agents of development in the function of increasing equity, economic growth or national stability towards increasing the welfare of the people at large. The difference between a commercial bank and a people's credit bank lies in their activities where rural credit banks cannot provide services to payment traffic. And people's credit bank activities are narrower than commercial banks (Kasmir, 2012: 21).

The existence of rural banks (BPR) can reach micro areas and can help MSMEs in micro areas that are not yet accessible by commercial banks. In its operational activities, the bank has the main objective to achieve maximum profitability. Profitability is the company's ability to earn profits in relation to sales, total assets and own capital (Sartono, 2012: 122). In order to achieve the level of profitability, banks are faced with risks that can occur due to the provision of services to the public, both lending and funding.

Regarding the profitability of people's credit banks, in the province of Bali, especially Tabanan Regency, in 2019, 5 out of 21 BPRs registered with the OJK did not make a profit (<u>www.ojk.go.id</u>) based on this phenomenon, BPR in Tabanan Regency was chosen to be the population in this study. It is very important for the banking sector to always pay attention to the risks that may occur. One of the indicators (measuring

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instruments) that can be used to measure the level of profitability is the Return on Assets (ROA). The Return on Asset (ROA) ratio focuses the company's ability to obtain earnings in the company's operations.

There are several aspects used to assess the health of rural credit banks, including from the point of view of earnings, liquidity and efficiency. Earnings can be reflected through the Net Interest Margin (NIM), liquidity can be reflected through the Loan to Deposit Ratio (LDR) and efficiency through operating expenses to operating income (BOPO) (Kasmir, 2012: 11).

*Net Interest Margin*(NIM) is the ratio used to measure the ability of bank management to manage its productive assets in order to generate net interest income (Taswan, 2010: 167). Measuring the NIM ratio is very important because interest income needs to be calculated specifically because the net interest income is obtained from providing credit or loans, while BPR has an interest expense obligation on its debtor. The greater the NIM ratio, the higher the interest income on productive assets managed by the BPR so that the possibility of a BPR in a problematic condition is getting smaller, in other words the higher the NIM ratio, the better the BPR's financial performance. The results of the research of Taufik (2011) and Anne (2012) show that NIM has a positive effect on ROA,

BPR health can also be assessed in terms of liquidity, where liquidity is a description of the company's ability to meet short-term obligations (debt) (Kasmir, 2012: 129). The ratio used to measure BPR liquidity is the Loan To Deposit Ratio. LDR is a ratio that shows a bank's ability to provide funds to its debtors with owned capital and funds that can be collected from the public (Kasmir, 2014: 225). The higher this ratio the higher the level of loans extended to the community. If the loan repayment rate is not smooth, it will result in a decrease in the BPR's ability to repay its obligations to customers who have invested their funds with loans that have been extended to their debtors.

The next ratio that can be used to measure BPR efficiency is Operating Expenses to Operating Income. The BOPO ratio is used to measure the level and distribution of operating costs in generating operating income. The higher the OEOI, the more inefficient the bank is in controlling its operational costs so that it can result in a lower level of profit. This is in line with research from Erna (2016) that BOPO has a negative effect on ROA while the results of research from Usman (2016) state that OEOI has a positive effect on ROA. In addition, the results of research from Reychard (2013) state that OEOI has no effect on ROA.

Based on the background of the problems above, the main problems in this study are:

- 1. Does Net Interest Margin (NIM) affect BPR Profitability?
- 2. Does Loan To Deposit Ratio (LDR) affect BPR Profitability?
- 3. Does Operational Cost Operating Income (BOPO) affect the BPR Profitability? Based on the subject matter above, the objectives of this study are:
- 1. This is to determine the effect of Net Interest Margin (NIM) on BPR Profitability.
- 2. This is to determine the effect of the Loan To Deposit Ratio (LDR) on BPR Profitability.
- 3. This is to determine the effect of operational costs operating income (BOPO) on BPR profitability.

## **CONCEPTUAL FRAMEWORK AND HYPOTHESES**

### **Agency Theory**

Ramadona (2016) states that agency theory is related to agreements between members in

a company. In this theory also describes the monitoring of various types of costs and the coercion of relationships between these groups. Management will try to maximize welfare for itself by minimizing various agency costs, this is one of the hypotheses in agency theory. Companies are expected to choose accounting principles to maximize their interests by selecting appropriate accounting principles.

Agency theory is a principal and agent contact. Principal is a share owner or what is called an investor and agent is a manager who is in charge of carrying out management functions in the company. The main point of agency correlation is the differentiation of functions between investors and management (Ramadona, 2016). The principal uses an agent to work in performing duties in the principal's affairs, including the transfer of power from the principal to the agent. In a BPR the principal is the owner of the capital or the investor of the BPR and the agent is the management within the BPR.

Agency theory also describes the occurrence of information asymmetry or is called the imbalance of information between agent and principal. The difference in interests makes each individual try to prosper himself, so that the agent will hide various information that is not known by the principal by taking advantage of the imbalance of information it has. Minimizing conflicts between the owner and the agent, then both parties enter into a work contract agreement by adjusting the proportion of their respective rights and obligations in order to achieve the expected utility. The agreement is expected to maximize owner's utility and can satisfy and guarantee management to receive rewards for the results of company management.

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This theory explains how to minimize conflicts between agents and owners, so agents must maintain the financial performance of the BPR. This study examines financial ratios that affect financial performance, so that the results of this analysis can be used as a reference for improving BPR financial performance and minimizing agency conflicts.

#### Net Interest Margin (NIM)

NIM is used to measure management's ability to manage its productive assets to generate net interest income (Frianto, 2012: 71). IncomeBPR is obtained from the interest received through loans, less interest costs from the source of funds collected. Increasing the NIM acquisition can be done by suppressing the cost of funds, the cost of funds is the interest paid by the company to each source of funds concerned (Riyadi, 2009: 21). Overall, the costs that must be incurred will determine what percentage determines the interest rate on loans given to customers to earn net income. The interest rate can determine the NIM, the greater this ratio, the increase in interest income on managed productive assets so that the possibility of being in a problematic condition is getting smaller (Taswan, 2010: 167). Based on Bank Indonesia Regulation No.6 / 10 / PBI / 2004, the best number for an NIM ratio is at least above 5%.

#### Loan to Deposit Ratio (LDR)

Liquidity can be measured using the Loan to Deposit Ratio. Liquidity is a ratio to measure a bank's ability to meet its short-term obligations when they are collected. The bank can pay back the disbursement of depositors' funds when they are collected and can meet the credit requests that have been submitted (Darmawi, 2011: 61).

According to Kasmir (2012: 225) LDR (*Loan to Deposit Ratio*) is the ratio used to measure the composition of the amount of credit extended compared to the amount of public funds and capital used. The higher this ratio, the lower the liquidity of the bank concerned. Conversely, the lower this ratio, the higher the liquidity of the bank concerned. Kasmir (2012: 225) states that the safe limit of a bank's LDR is around 80%. However, the maximum limit is 110%. Based on Bank Indonesia Regulation No. 15/7 / PBI / 2013 LDR standard is 78% -92%. If the LDR ratio is below or less than 78%, it means that the bank is unable to properly channel all the funds that have been collected. If the LDR ratio is above or more than 92%, then the total credit extended by the bank has exceeded the funds raised.

#### **Operating Expenses to Operating Income (BOPO)**

The efficiency of a bank can be measured using the ratio of Operating Expenses to Operating Income (BOPO). Operating Costs Operating Income (BOPO) is a comparison or ratio of operating costs in the last 12 months to operating income in the same period (Hasibuan, 2011: 101).

The BOPO ratio reflects a lack of improvement in the company's ability to reduce operating costs and increase operating income which may result in losses due to inefficient management of its business. Any increase in operating costs will result in a decrease in profit before tax and will ultimately reduce the profit or profitability (ROA) of the company concerned (Andrea, 2012). Bank Indonesia determines the best figure for the BOPO ratio is below 90% because if the ratio exceeds 90% to close to 100%, Bank Indonesia can be categorized as inefficient in carrying out operations.

#### Profitability

According to Wiagustini (2010: 76) profitability is the company's ability to earn profits or a measure of the effectiveness of company management so that the company can find out how much profit is earned in a certain period. Profitability in the banking sector is very important because banking has a close relationship with the welfare of society.

Financial ratios that can be used as a measure of profitability are *Return on Asset*. ROA is a comparison between profit before tax with the average total assets in a period. This ratio can be used as a measure of the bank's financial health. This ratio is very important, considering the benefits obtained from the use of assets can reflect the level of business efficiency of a bank.

#### **Research Hypothesis**

## Effect of NIM on Profitability

NIM shows the ratio of bank interest income to outstanding credit and shows the ability of the bank to earn its operating income. Based on Bank Indonesia Regulation No. 6/10 / PBI / 2004 sets the best number for an NIM ratio of at least 5% and above. The greater this ratio, the increase in interest income on productive assets managed by the bank so that the possibility of a bank in a problematic condition is getting smaller. Research results from Taufik (2011), Anne (2012) that NIM has a positive effect on profitability. Based on the theoretical basis and previous research studies, the following research hypothesis is compiled:

H<sub>1</sub>: NIM has a positive effect on profitability

#### Effect of LDR on Profitability

*Loan to Deposit Ratio*(LDR) reflects a bank's ability to repay depositors' withdrawals by relying on loans. Based on Bank Indonesia Regulation No. 15 / 7.PBI / 2013 LDR standard is 78% -92%. The greater this ratio, it is expected that the greater the profit that can be obtained, on the contrary, the lower the LDR, the financial performance of a bank which causes the ROA to fall (Kasmir, 2012: 225). Research results from Anggrainy (2010), Anne (2012), Reychard (2013), and Usman (2016) show that LDR has a positive effect on profitability. Based on the theoretical basis and previous research studies, the following research hypothesis is compiled:  $H_2$ : LDR has a positive effect on profitability

### Effect of BOPO on Profitability

BOPO is used to measure the level of efficiency and ability of a bank in carrying out its operational activities. Any increase in operating costs will result in reduced profits for the bank, so that the higher the BOPO, the lower the ROA. Bank Indonesia determines the best figure for the BOPO ratio is below 90% because if the ratio exceeds 90% to close to 100%, Bank Indonesia can be categorized as inefficient in carrying out operations. According to Usman (2016) the smaller this ratio means the more efficient the operational costs incurred by the bank concerned, conversely, if the higher this ratio, the more operational costs are incurred. This is in line with the results of research from Sudiyatno (2010), Anggrainy (2010) and Erna (2016)that BOPO has a negative effect on profitability. Based on the theoretical basis and previous research studies, the following research hypothesis is compiled:

H<sub>3</sub>: OEOI has a negative effect on profitability

## III. RESEARCH METHOD

This research was conducted at BPR in Tabanan Regency in 2018-2019. Data obtained from secondary sources, namely on the site www.ojk.go.id. The data collection method used is purposive sampling Based on the specified criteria, a sample of 40 companies was obtained.

## **Operational Definition of Variables**

- 1. NIM is the ratio used to measure the ability of bank management to manage their productive assets to generate net interest income (Pandia, 2012: 71).
- **2.** LDR is a ratio to measure the composition of the amount of credit given compared to the amount of public funds and cashmere's own capital, 2011: 290).
- **3.** BOPO is a ratio used to measure the ability of bank management to control operating costs against operating income (Pandia, 2012: 72).
- **4.** Profitability is the company's ability to earn profits or a measure of the effectiveness of company management (Wiagustini, 2010: 76).

#### Data analysis technique

The analysis technique used to determine the relationship between NIM, LDR and OEOI on Profitability is multiple linear regression analysis with the following equation:

 $Y = a + \beta 1X1 + \beta 2X2 + \beta 3X3 + e...(1)$ 

Information:  $\mathbf{V} = \mathbf{Profitability}$ 

$\mathbf{Y} = \mathbf{Profitability}$	
a	= Constant
β1- β3	= Regression coefficient
$X_1$	= NIM
$X_2$	= LDR
X <sub>3</sub>	= BOPO
e = error	

Prior to multiple linear regression analysis, the classical assumption test was carried out. In addition, a model feasibility test was also carried out consisting of the F test, the coefficient of determination and the t test.

## **RESULTS AND DISCUSSION**

### **Descriptive Statistics**

Descriptive statistics describe information about the characteristics of research variables consisting of the number of observations, the minimum value, the maximum value, the mean value and the standard deviation. The results of descriptive statistics will be presented in Table 1.

Table 1. Descriptive Statistical Test Results								
	N Minimum		Maximum	Mean	Std. Deviation			
NIM	40	.47	176.47	35.3760	42.91900			
LDR	40	4.06	200.04	78.8560	50.13156			
BOPO	40	60.68	215.85	97.1198	28.33093			
ROA	40	-70.60	9.14	5090	11,59587			
Valid N (listwise)	40							

Table 1. Descriptive Statistical Test Results

Source: Secondary data processed (2020)

Table 1 shows that the number of samples in this study was 40. The NIM variable has a minimum value of 0.47, a maximum value of 176.47, a mean of 35.3760, and a standard deviation of 42.91900. This means that there is a difference in the NIM value against the average value of 42.91900.

The LDR variable has a minimum value of 4.06, a maximum value of 200.04, a mean of 78.8560, and a standard deviation of 50.13156. This means that there is a difference between the LDR value to the average value is 50.13156.

The BOPO variable has a minimum value of 60.68, a maximum value of 215.85, a mean of 97.1198, and a standard deviation of 28.33093. This means that there is a difference in the value of BOPO to the average value of 28.33093.

The ROA variable has a minimum value of -70.60, a maximum value of 9.15, a mean of -0.5090, and a standard deviation of 11,59587. This means that there is a difference in the value of ROA to the average value of11,59587.

#### Classic assumption test

The classical assumption test is a condition that must be met before performing multiple linear regression analysis.

Normality test

The normality test in this study used the one sample Kolmogorov-Smirnov (KS) test. The criteria used is Ho is accepted if sig. KS> 0.05. The results of the normality test can be seen in table 2.

Unstandardized Residual		
N		40
Normal Parametersa, b	Mean	.0000000
	Std. Deviation	7,42915792
Most Extreme Differences	Absolute	.096
	Positive	.070
	Negative	096
Statistical Test		.096
Asymp. Sig. (2-tailed)		.200c, d

#### Table 2. Normality Test Results

Source: Secondary data processed (2020)

Table 2 shows a significance value of 0.096. This means that the processed data has a residual that is normally distributed because the significance is greater than 0.05.

The multicollinearity test aims to test whether the regression model found a correlation between independent variables (Ghozali, 2006: 124). To detect whether there is a correlation, it can be seen from the VIF value and tolerance. If the VIF value is less than or equal to 10 and the tolerance value is greater than 0.1, the regression model used is free of multicollinearity. Multicollinearity test results can be seen in table 3.

	Table 3. Multicollinearity Test Results	
Variable	Tolerance	VIF
NIM	.932	1,073
LDR	.938	1,066
BOPO	.950	1,053

Source: Secondary data processed (2020)

Table 3 shows that the tolerance value for each variable is greater than 0.1 and the VIF value is less than 10. This means that there are no symptoms of multicollinearity in this research model.

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Heteroscedasticity test is performed to determine whether the residual value has a constant variable. In this study using the glacier test. All variables are said to be free from heteroscedasticity symptoms if the significance value is above 0.05. The results of the Heteroscedasticity test can be seen in table 4.

Table 4. Heteroscedasticity Test Results				
Variable	Don't count	Sig.		
NIM		2,038	.049	
LDR		.245	.808	
BOPO		-7,109	.000	

Source: Secondary data processed (2020)

Table 4 shows that the significance value of the NIM, LDR, and BOPO variables is above 0.05. This means that the regression model used in this study is free from heteroscedasticity symptoms.

The autocorrelation test aims to test whether in the regression model there is a correlation between confounding error in period t and confounding error in period t-1 (Previous). The model to test for autocorrelation is the durbin waston test (DW Test). The results of the autocorrelation test can be seen in table 5.

#### Table 5. Autocorrelation Test Results Model Summary b

			Adjusted R	Std. Error of the	
Model	R	R Square	Square	Estimate	Durbin-Watson
1	.768a	.590	.555	7.73251	1,942

a. Predictors: (Constant), BOPO, LDR, NIM

b. Dependent Variable: ROA

Source: Secondary data processed (2020)

Table 5 shows the DW statistic value of 1.942, this value is compared with the table value using a significance value of 5%, a sample size of 40 (n) and the number of independent variables 3 (k = 3). So the value of dw is in du <dw <4-du or1.6589 < 1,942 <2,3411. This means that there is no autocorrelation and this model can be used for further analysis.

## Multiple Linear Regression Analysis

## Table 6. Determination Coefficient Test Results Model Summary b

		Adjus	sted R Square	Std. Error of the	
Model	R	R Square	-	Estimate	Durbin-Watson
1	.768a	.590	.555	7.73251	1,942
a. Predictors: (	Constant), BOPO, I	LDR, NIM			

b. Dependent Variable: ROA

Source: Secondary data processed (2020)

Table 6 shows the results of the goodness of fit test, namely the adjusted R Square value of 0.555. This means that the profitability can be explained by 55.5 percent by the NIM, LDR and BOPO variables, while the remaining 44.5 percent is explained by other variables not used in this research model.

Table 7. F Test Results ANOVAa	
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Model		-	Sum of Squares	Df	Mean Square	F	Sig.
	1	Regression	3091,597	3	1030,532	17,235	.000b
		Residual	2152,503	36	59,792		
		Total	5244,100	39			

a. Dependent Variable: ROA

b. Predictors: (Constant), BOPO, LDR, NIM

Source: Secondary data processed (2020)

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Table 7 shows the results of the f test showing a significance value of 0.000, which means that NIM, LDR and OEOI have a simultaneous effect on profitability.

		Ta	able 7. T Test F	Results			
		nstandardized Coefficients	1	Standardized Coefficients			
Model		В	Std. Error	Beta		t	Sig.
1	(Constant)	18,121	3,511			5,16	1.000
	NIM	.061	.030		.225	2,03	8.049
	LDR	.006	.026		.027	.24	5.808
	BOPO	-209	.029		-779	-7,10	9.000

Source: Secondary data processed (2020)

- 1. NIM shows the t value of 2.038 with a significance of 0.049 less than 0.05. This means that NIM has a positive effect on profitability, so H1 is accepted.
- 2. LDR shows the t value of 0.245 with a significance of 0.808 greater than 0.05. This means that LDR has no effect on profitability, so H2 is rejected.
- 3. BOPO shows the t value of -7.109 with a significance of 0.000. This means that BOPO has a negative effect on profitability, so H3 is accepted

#### **Discussion of research results**

Effect of NIM on Profitability

The test results state that NIM has a positive effect on profitability. This matterin accordance with the previous theory and hypothesis where any net interest income earned by the bank will enter the pre-tax profit and ultimately increase the bank's profitability. Increasing NIM on BPR means good performance. Effect of LDR on Profitability

The test results state that the LDR has no effect on profitability. The LDR does not affect bank profitability because the financial reserves are already in the form of reserves to overcome problem loans. Effect of BOPO on Profitability

The test results show that BOPO has a negative effect on profitability. BOPO is used as an indicator to measure the level of banking efficiency. The negative result shows that high operating costs compared to operating income can reduce the profitability obtained by the bank.

## V. CONCLUSIONS

Based on the explanation above and the results of the analysis, it can be concluded that:

- 1. NIM has a positive effect on profitability
- 2. LDR has no effect on profitability
- 3. BOPO has a negative effect on profitability

The implication of this research is that it can be used as a reference and reference for the banking sector, especially rural credit banks, in order to increase the NIM ratio which has a positive effect on profitability and to maintain the level of banking efficiency related to operational costs incurred so as not to have a negative effect on bank profitability.

The limitation of this study is that this study only uses 3 independent variables, so that further research can add other variables. In addition, this research was only conducted in Tabanan Regency for 2 periods, further research can be carried out by expanding the scope of research so that the research results can be generalized.

## REFERENCES

[1] Andrea, Widianata. 2012. Analysis of the Effect of Ratio CAR, NPL, NIM, OEOI, LDR, Against ROA. Case Study of National Private Commercial Banks Registered at Bank Indonesia Period 2009 - 2011. Thesis. Management Study Program, Faculty of Economics and Business, Diponegoro University. Semarang.

Table 7 shows the multiple linear regression equation between the variables as follows: Y = 18,121 + 0,061X1 + 0,006X2 - 0,209X.....(2)

- [2] Anggrainy, Princess. 2010. Analysis of the Effect of CAR, NPL, BOPO, NIM and LDR on ROA. Case Study of Go Public Commercial Banks Listed on the Indonesia Stock Exchange in 2005-2009. Indonesian Journal of Accounting Research, Vol 4, No. 2, pp 1-25.
- [3] Anne, Maria. 2012. The Effect of CAR, OEOI, NIM, NPL and LDR on ROA Case Studies at 10 Best Banks in Indonesia 2007-2011 Period. Journal of Economics, Faculty of Business and Economics, University of Surabaya, Vol 4, No 1, pp. 1-25.
- [4] Agus Sartono. 2012. Financial Management Theory and Applications. 4th Edition BPFE. Yogyakarta.
- [5] Bank Indonesia, 1998, Law no. 10 of 1998, concerning amendments to Law no. 7 of 1992, Jakarta.
- [6] Erna, Sudarmawanti, and Joko, Pramono. 2016. The Effect of CAR, NPL, BOPO, NIM and LDR on ROA Case Studies at Rural Banks in Salatiga Registered in the Financial Services Authority in 2011- 2015. Journal Among Makarti, Vol 10, No.19, pp. 2-18.
- [7] Ghozali, Imam. 2006. Application of Multivariate Analysis with SPSS Program. Fourth Prints. Semarang: Diponegoro University Publishing Agency.
- [8] Hasibuan, Malayu SP 2009. Basic Management, Understanding, and Problems. Jakarta: PT Bumi Aksa
- [9] Pandia, Frianto. 2012. Fund Management and Bank Soundness. Jakarta: Rineka Cipta Publisher
- [10] Cashmere. (2012). Banking Basics. PT Raja Grafindo Persada: Jakarta.
- [11] Ramadona, Aulia. 2016. The Effect of Managerial Ownership Structure, Institutional Ownership Structure, Company Size and Leverage on Accounting Conservatism. JOM Fekon, Vol 3, No.1, pp. 1- 10.
- [12] Reychard, Griha. 2013. Analysis of the CAMEL Ratio Factor on the Profitability of Rural Banks in Pekanbaru in 2008-2012. *Jom FEKON*, Vol 1 No. 2, pp. 1-25.
- [13] Riyadi, Slamet. 2009. Banking Asset & Liability Management. Jakarta: Faculty of Economics, University of Indonesia.
- [14] Taswan. 2010. Banking Management, Concepts, Techniques, and Applications. Second Edition. Yogyakarta: UPP STIM YKPN
- [15] Taufik, Zulfikar. 2011. The Effect of CAR, LDR, NPL, BOPO and NIM on the Profitability Performance (ROA) of Rural Banks in Indonesia. *Indonesian Journal of Management*, Vol 18, No. 3, pp. 175-183.
- [16] Usman, Harun. 2016. The Effect of Financial Ratios CAR, LDR, NIM, BOPO, NPL on ROA. Journal of Business Research and Management, Vol4, No.1, pp. 67-82.
- [17] Wiagustini, Ni luh Putu. 2010. Basics of Financial Management. Denpasar. Udayana University Press.
- [18] www.ojk.go.id