# DETERMINANTS OF RURAL BANK PROFITABILITY IN YOGYAKARTA: PERIOD 2012-2015

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## *ABSTRACT*

*The main objective of this study is to find out the determinants of rural bank profitability in yogyakarta period 2012-2015. Rural Bank is a financial institution whose main activity accept demand deposits, savings and deposits to society so helps rationalize the developing regions or developing country to finance their progress. As it is necessary to control the quality of rural bank performance which is to see the level of profitability by using Return on Assets ratio. This study uses panel data from annual financial statement data published in in districts / cities from 2012 to 2015. The result shows that capital rate (capital adequacy ratio) has positive and significant impact to ROA. liquidity rate and credit distribution rate (loan to deposit ratio) is not significant to ROA. Asset quality rate (Non-Performing Loan) and operational efficiency rate (BOPO) has significantly negative influence to ROA.*

**Keywords***:*

## RESEARCH BACKGROUND

The development of Rural Bank in Yogyakarta in general is categorized strong and steady as judged in its ability to survive the global crisis that hit Indonesian Banking field in early 2008. Even the development of Rural Bank in Yogyakarta is better than the development of BPR at the national level. But in the end of 2010, a disaster happened in Yogyakarta as the Merapi Mountain erupted. The catastrophe, of course, had an impact on people in the surrounding area. Therefore, this study is aimed to determine and prove whether Rural Bank in Yogyakarta which in 2008 was resistant to the global crisis, now able to survive the aftermath of Merapi eruption that occurred in 2010 with reference to its financial results. In General the Rural Bank is a financial

institution whose main activity accept demand deposits, savings and deposits to society so helps rationalize the developing regions or developing country to finance their progress. As it is necessary to control the quality of rural bank performance which is to see the level of profitability by using Return on Assets ratio. Based on the above background, referring to the ongoing fluctuating ratios of Return on Assets (ROA) in Rural Bank in Yogyakarta, it is necessary to study the factors affecting ROA of Conventional Rural Bank in Yogyakarta as the implementation of bank's measurement performance in managing and using its assets to generate profit by taking a case study on Conventional BPR spread throughout the cities in the special region Yogyakarta where the sample used is entire Conventional BPR in Bantul, Gunung kidul, Kulon progo, Sleman and Yogyakarta.

## B. Research Question

Based on the above explanation, the problems encountered in this paper include the following:

1. How does CAR (Capital Adequacy Ratio) influence to profitability (ROA) of Rural Bank in Yogyakarta ?
2. How does LDR (Loan to Deposit Ratio) influence to profitability (ROA) of Rural Bank in Yogyakarta ?
3. How does BOPO (Operating Income Operating Costs Against) influence to profitability (ROA) of Rural Bank in Yogyakarta ?
4. How does NPL (Non-Performing Loan) influence to profitability (ROA) in Rural Bank Yogyakarta ?

## C. Research Objectives

Based on the problems in the study, the purpose of this study is to determine the effect of CAR (Capital Adequacy Ratio), LDR (Loan to Deposit Ratio), operational

expenses against Operational Income (BOPO) and NPL (Non-Performing Loan) against the profitability (ROA) in Rural Banks in Yogyakarta in the period 2012 until 2015.

### D. Research of Benefits.

In general, this research is expected to increase knowledge about economics to make decisions on policies and to increase local revenue.

1. As specific benefit for science, this research is expected to be a source of new data that could be further developed in conducting future research.
2. As a reference for researchers who are interested to study in the same field with the different approach and scope.
3. As an input and recommendation to policy-makers especially the local government of Yogyakarta relating to the development of BPR in order to boost the regional economy so as to achieve a fair and prosperous welfare.

## RESEARCH METHODS

### A. Subject and Object Research

The covered research area is the entire Yogyakarta province which consists of Bantul, Gunung kidul, Kulon progo, Sleman, Bantul and Yogyakarta. An object in this study is using the dependent variable profitability (ROA) whereas the independent variables used are CAR, LDR, BOPO and NPL.

### B. Type and Source of Data

The type of data that is needed in this study includes secondary data. Secondary data is data obtained indirectly from the source, such as quotes from books, literature, scientific literature, journals and so on that have peculiar relevance to the theme

research. Secondary data in this study is also obtained from a variety of required documents, sourced from Bank Indonesia and supported by the journal, or the previous studies and the relevant literature. This research is conducted in Yogyakarta which covers six districts items, namely from Bantul, Gunung kidul, Kulon progo, Sleman, Bantul, and Yogyakarta. This secondary data is in the form of time series and cross section.

The study period covers the period from 2012 to 2015. The data needed in the research are:

1. Profitability (ROA) Rural Bank in entire Yogyakarta province includes Bantul, Gunung kidul, Kulon progo, Sleman, and Yogyakarta city 2012-2015.
2. CAR of Rural Bank in entire Yogyakarta province includes Bantul, Gunung kidul, Kulon progo, Sleman, and Yogyakarta city 2012-2015
3. LDR of Rural Bank in entire Yogyakarta province includes Bantul, Gunung kidul, kulon progo, Sleman, and Yogyakarta city 2012-2015
4. BOPO of Rural Bank in entire Yogyakarta province includes Bantul, Gunung kidul, Kulon progo, Sleman, and Yogyakarta city 2012-2015.
5. NPL of Rural Bank in entire Yogyakarta province includes Bantul, Gunung kidul, KulonProgo, Sleman, and Yogyakarta city 2012-2015.

## C. Population and Sample

- Population is the subject of research. If someone wants to examine all elements within the study area, the research is the study population. The research subject covering all contained in the population (Arikunto, 2002).

- The population of this research is the BPR in 5 regions in the province of Yogyakarta (Bantul, Gunung kidul, Kulon progo, Sleman and Yogyakarta), from the

population, the researchers took data for the research sample that is from 2012 to 2015.

## C. Analysis Methode

### 1. Panel Data Regression Model

To achieve the objectives of research and testing hypothesis, then in this research used multiple regression analysis to determine whether there is a significant effect of the independent variable to dependent variable or not. Data used in this research is panel data then, it used multiple linear regression panel data models which formulated as follows:

**Y= α + bXit + b2X2it + b3X3it + b4X4it + e**

Explanation:

Y= Dependent variable (ROA)

α = Constanta

X1 = CAR

X2 = LDR

X3 =BOPO

X4 = NPL

$b_{(1....3)}$ = Regression coefficient on each independent variable

e = Error term

t = Time

i = Company

### 2. Metode Estimasi Model Regresi Panel

In the method of estimation models for the data panel can be done through two approaches that are fixed effect and random effect.

a. Common Effect Model

Panel data model approach is the simplest because it combines data time series and cross section. In this model neglected dimension of time as well as individuals, so it is assumed that the behavior of the data the same company in different periods. This method can use the approach Ordinary Least Square (OLS) or a least squares technique to estimate the panel data model.

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b. Fixed Effect

This model assumes the differences among individual can be accommodate from the difference intercept. To estimate panel data fixed effect model is using dummy variable to capture the intercept differences between companies, intercept differences may occur due to differences in work culture, managerial, and intensive. However, the slop is same among the companies. This model is also called as *Least Squares Dummy Variable* technique (LSDV).

c. Random Effect

This model will estimate panel data where the disturbance variable may be related among the time and among the individual. In random effect model the intercept differences accommodate by error terms of each companies. The advantage using random effect model is to eliminate

heteroscedasticity. This model is also called as *Error Component Model* (ECM) or Generalized Least Square technique (GLS).

**3. The Selection of Estimation Method**

In this research, data panel is the model to test whether independent variables influence the dependent variable. There are two approaches to estimate the regression model namely Fixed Effect Model and Random Effect Model. To select the best model, it is needed to do the specification test namely Chow Test and Hausman Test.

a. Uji Chow

Chow test is testing to determine the appropriate model among Fixed Effect or Random Effect that used to estimate Panel data. This testing is done with the hypothesis as follows:

Ho : Model PLS (Restricted)

H1 : Model Fixed Effect (Unrestricted)

From rejected to H0 is used F-statistic like this formula

Where:

RSS = Restricted Residual Sum Square (Sum Square Residual is obtained from panel data estimation with pooled least square method / common intercept).

N = Number of cross section data

T = number of time series data

K = The number of explanatory variables

This test follows the distribution of the F statistic is FN-1, NT-NK if the value of F-test or Chow Statistic (F statistic) test results greater than F-table, it is enough to reject the null hypothesis that the model to be used is the model fixed effect.

b. Uji Hausment

Hausman test aimed to compare the fixed effect method with random method effect. The result of this test is to determine which method should be selected. The hypotheses that used in this test are:

$H_0$: Random effects method

$H_1$: Fixed effects method

If *p*-value > 0.05, then $H_0$ accepted and $H_1$ rejected

If *p*-value < 0.05, then $H_0$ rejected and $H_1$ accepted

c. Uji Lagrange Multiplier

To find out if the model is better than the Random Effect Effect Common method (OLS) test was used Lagrange Multiplier (LM). LM test is based on the distribution of Chi-Squares with degrees of freedom (df) equal to the number of independent variables. Nulnya hypothesis is that the right model for panel data regression is Common Effect, and the alternative hypothesis is the right model for panel data regression is Random Effect.

## RESULTS ANALYSIS

### Data Quality Test

Test of the data quality this study is using classic assumption test. Classical assumptions used in this research are Heteroscedasticity and Multicollinearity.

#### 1. Heteroscedasticity Test

Heteroscedasticity gives the sense that there is a difference in a model of residual variance on observation. In good models there should not be any Heteroscedasticity. In the Heteroscedasticity test, problems that arise derived from variations in cross section that is used. In fact, in a cross-sectional that includes

heterogeneous units, Heteroscedasticity may be a custom (rules) of the exclusion (Gujarati, 2006).

Heteroscedasticity test aims to test whether in the regression model occurred inequality residual variance from one observation to another observation. A good regression model is that homoscedasticity or absent of heteroscedasticity. Heteroscedasticity symptoms are more common in cross section (Ghozali, 2005: 28).

Based on the Park Test, the probability value of all the independent variables are not significant at the level of 5 percent. This situation shows that the presence of the same variant or occurrence of homoscedasticity between the values of the independent variables with the residuals of each variable itself (VarUi = σ_u ^ 2). Here is the output of Heteroscedasticity test results using the Park Test:

**Table 4.2.**
**Heteroscidasticity Test with Park Test**

| Variabel | Probabilitas |
|---|---|
| C | 0.6478 |
| X1? | 0.1193 |
| X2? | 0.1220 |
| X3? | 0.4730 |
| X4? | 0.9594 |

*Source: Modified Data, 2016 (appendix 2*

Information:

C = ROA (Return Of Assets)

X1 = CAR

X2 = LDR

X2 = BOPO

X3 = NPL

From the above table, it can be concluded that all the data used as independent variables are free from Heteroscidasticity as known on the outcome of the probability

that all independent variables used in this case is the CAR, LDR, BOPO, and NPL greater than 5%, α = 0:05.

**2. Multicollinearity Test**

In a test of classic assumption deviation, to approach multicollinearity is applied with an approach over $R^2$ value and significance of the variables used. The elaboration is by analyzing the data used by every variable and resulted of the existing data. The data used include data time series and cross section. However multicollinearity occurs usually on time series data (time series) on the used variables. Rule of Thumb also said that if the high $R^2$ obtained while there is a majority or all of partially insignificant variables, multicollinearity then allegedly occurred on that model (Gujarati, 2006).

There are several ways to overcome multicollinearity in the model. One is to look at the correlation coefficient output resulted from the computer. If there is a correlation coefficient greater than 0.9 then the multicollinearity symptoms occurs (Basuki, 2014)

**Table 4.3.**
**Test Multicollinearity (Correlation Matrix)**

| | BANTUL | GUNUNG KIDUL | KULON PROGO | SLEMAN | YOGYAKARTA |
|---|---|---|---|---|---|
| BANTUL | 1 | 0.2934 | -0.1527 | 0.5000 | -0.1771 |
| GUNUNGKIDUL | 0.2934 | 1 | -0.0646 | 0.1396 | -0.1155 |
| KULONPROGO | -0.1527 | -0.0646 | 1 | 0.0391 | 0.5445 |
| SLEMAN | 0.5000 | 0.1396 | 0.03910 | 1 | -0.2016 |
| YOGYAKARTA | -0.1771 | -0.1155 | 0.5445 | -0.2016 | 1 |

*Source: Modified data, 2016 (Appendix 3)*

Based on Table 5.2, testing method partial correlation between above districts shows there are no multicollinearity problems in the model. That' is due to the value of the correlation matrix (matrix correlation) is less than 0.9.

**C. Selection Model**

In the estimation method regression model using panel data can be performed through three approaches, among others Common Effect Model by using the approach of Ordinary Least Square (OLS) or the technique of least squares, Fixed Effect Model that often called the technique of Least Squares Dummy Variable (lSDV) and Random Effect model is also called the Error Component Model (ECM) or technique Generalized Least Squares (GLS).

Testing can be done in the first time to choose a model that will be used in managing data panel that is Chow Test, which is a test to determine the model of Fixed Effect or Common Effect most appropriately used in estimating panel data. The results of the statistical test are as follows:

1. Chow test

   In testing Chow Test, panel data is estimated using fixed effects specification. This test aims to determine whether to use a fixed effect models or common effect.

   H0: Common Effect

   H1: Fixed Effect

   If the result of chi-square probability is less than 5% alpha then Ho is rejected, so the model uses a fixed effect. The results of the estimation using fixed effects specifications are as follows:

**Table 4.4.**
**Chow Test (Test Likelihood)**

| Effects Test | Statistic | d.f. | Prob. |
|---|---|---|---|
| Cross-section F | 20.737426 | (4,176) | 0.0000 |
| Cross-section Chi-square | 71.437724 | 4 | 0.0000 |

Source: Data processing results panel using the program Eviews 7 (Appendix 4).

According to the above Chow Test table, both probability values of *Cross Section F* and *Chi Square* is 0.0000 lesser than Alpha 0.05 to reject the null hypothesis. According to the Chow test, the best model used is fixed effect. Based on the results of the chow test, then the data test continues to Hausman Test.

2. Hausman test

Hausman test is aimed to find out whether the Random Effect Model (REM) is better than Fixed Effect Model (FEM).

H0: Random effect

H1: Fixed effect

If the probability of Chi-square is bigger than alpha of 5%, then model is preferably using Random Effect. The results of estimation using random effects specifications are as follow:

**Table4.5.**
**Hausmant Test**

| Test Summary | Chi-Sq. Statistic | Chi-Sq. d.f. | Prob |
|---|---|---|---|
| Cross-section random | 82.949705 | 4 | 0.0000 |

*Source: Data processing results panel using the program Eviews 7 (Appendix 5).*

According to the table, the probability values is 0.0000 smaller than Alpha 0.05 to accept the hypothesis one. So, based on Hausman test, the best model used is the model by using the Fixed Method Effect.

## E. Analysis of Panel Data Model

Selection of this model is using the best analytical test and more fully described in the following table.

**Table 4.6.**
**Results Estimates CAR,'LDR, BOPO, NPL on profitability (ROA) to RB's in five districts in Yogyakarta.**

| | **Model** | |
|---|---|---|
| | **Fixed Effect** | **Random Effect** |
| **Konstanta** | 8.831815 | 3.828169 |
| Standar error | 1.039752 | 0.714299 |
| T-Statistic | 8.494155 | 5.359335 |
| Probabilitas | 0.0000 | 0.0000 |
| **CAR** | 0.053865 | 0.090049 |
| Standar error | 0.016427 | 0.011909 |
| T-Statistic | 2.428481 | 7.561165 |
| Probabilitas | 0.0162 | 0.0000 |
| **LDR** | 0.008610 | 0.000264 |
| Standar error | 0.005542 | 0.005396 |

| | | |
|---|---|---|
| T-Statistic | 1.553739 | 0.048976 |
| Probabilitas | 0.1220 | 0.9610 |
| **BOPO** | -0.090044 | -0.027051 |
| Standar error | 0.010643 | 0.004871 |
| T-Statistic | -8.460719 | -5.553133 |
| Probabilitas | 0.0000 | 0.0000 |
| **NPL** | -0.183952 | -0.178135 |
| Standar error | 0.038347 | 0.022888 |
| T-Statistic | -4.797087 | -7.782838 |
| Probabilitas | 0.0000 | 0.0000 |
| **$R^2$** | 0.533232 | 0.313243 |
| **F-Statistik** | 25.13267 | 20.52532 |
| **Prob (F-Stat)** | 0.000000 | 0.000000 |
| **Durbin-Watson Stat** | 0.738369 | 0.492332 |

Note: *** = Significant 1%, ** = Significant 5%, * = Significant 10
Source: Data processing results panel using the program Eviews 7.

Based on the test model specifications that have been made from both the analysis; by using a Likelihood test and Hausman test, both suggested a different model. When tested by test Chow Test (Likelihood Test) model suggested to use Fixed Effect and when tested using the Hausman test model suggested to use fixed effect models.

In terms of probability and its R-square as well as comparison of the best election, then the regression model used in estimating Effect of CAR, LDR, BOPO to ROA in the district in Yogyakarta, is the Fixed Effects Model. Fixed Effect Model was chosen because it has a probability of each independent variable on the Fixed Effect model which is more significant than the Random Effect Model or Common Effect Model. Reasons for the selection of fixed models can also be seen from the coefficient of determination, how free variables would affect the dependent variable. The coefficient of determination (R-square) owned from the results of fixed model estimation by 0.53 which is bigger than the second other estimation models.

## E. Estimation Results of Panel Regression Model

After conducting statistical tests to determine which model will be chosen in the study, it was concluded that the Fixed Effect model is to be used in this study; the approach of panel data model that simply combines the data time series and cross section.

In this model, it is not indicated of dimension of time as well as individuals so it is assumed that the behavior of municipality / district data is identical in different periods. The following table shows the results of the estimation of data with the number of observations is of 5 districts during the period 2012-2015 (4years).

**Table 4.7.**
**Fixed Effect Model Estimation Results**

| **DependenVariabel : ROA** | **Model** |
|---|---|
| | **Fixed Effect** |
| **Konstanta** | 8.831815 |
| Standar error | 1.039752 |
| T-Statistic | 8.494155 |
| Probabilitas | 0.0000 |
| **CAR** | 0.053865 |
| Standar error | 0.016427 |
| T-Statistic | 2.428481 |
| Probabilitas | 0.0162 |
| **LDR** | 0.008610 |
| Standar error | 0.005542 |
| T-Statistic | 1.553739 |
| Probabilitas | 0.1220 |
| **BOPO** | -0.090044 |
| Standar error | 0.010643 |
| T-Statistic | -8.460719 |
| Probabilitas | 0.0000 |
| **NPL** | -0.183952 |
| Standar error | 0.038347 |
| T-Statistic | -4.797087 |
| Probabilitas | 0.0000 |
| **$R^2$** | 0.533232 |
| **F-Statistik** | 25.13267 |
| **Prob (F-Stat)** | 0.000000 |
| **Durbin-Watson Stat** | 0.738369 |

Note: *** = Significant 1%, ** = Significant 5%, * = Significant 10%
Source: Data processed, 2016 (Appendix 6)

From the estimation above, it can be made model of panel data analysis of the factors affecting the profitability of the BPR in regency in Yogyakarta, which concluded with the following equation:

$ROA = \beta0 + \beta1*LOGX1 + \beta2*LOGX2 + \beta3*LOGX3 + et$

Explanation:

$Y_{it}$ = ROA

$\beta0$ = Konstanta

β123 = Koefisienvariabel 1,2,3,4

X1 = CAR

X2 = LDR

X3 =BOPO

X4 = NPL

i = Regency / City

t = Time Period all t

ε = Error Term

The results of the above estimation, panel data model can be made on the profitability of the Rural Bank between districts in Yogyakarta, which is interpreted as follows:

ROA_BANTUL =
0.655931113465 + 8.83181542971 + 0.0538647596137*CAR_BANTUL +
0.00861018337406*LDR_BANTUL - 0.0900444924775*BOPO_BANTUL -
0.183951893521*NPL_BANTUL

ROA_GUNUNGKIDUL =
-1.10232071481 + 8.83181542971 + 0.0538647596137*CAR_GUNUNGKIDUL +
0.00861018337406*LDR_GUNUNGKIDUL -
0.0900444924775*BOPO_GUNUNGKIDUL -
0.183951893521*NPL_GUNUNGKIDUL

ROA_KULONPROGO =
-0.0241394724757 + 8.83181542971 + 0.0538647596137*CAR_KULONPROGO +
0.00861018337406*LDR_KULONPROGO -
0.0900444924775*BOPO_KULONPROGO - 0.183951893521*NPL_KULONPROGO

ROA_SLEMAN =
0.726956732052 + 8.83181542971 + 0.0538647596137*CAR_SLEMAN +
0.00861018337406*LDR_SLEMAN-0.0900444924775*BOPO_SLEMAN -
0.183951893521*NPL_SLEMAN

ROA_YOGYAKARTA =
-0.256427658234 + 8.83181542971 + 0.0538647596137*CAR_YOGYAKARTA +
0.00861018337406*LDR_YOGYAKARTA -
0.0900444924775*BOPO_YOGYAKARTA - 0.183951893521*NPL_YOGYAKARTA
Information:

Y = ROA (profitability)

X1 = CAR

X2 = LDR

X2 = BOPO

X3 = NPL

1. Bantul shows the coefficient value of 0.6559 where the value c at 8.8318. Thus, when the Car, LDR, ROA, NPLs were excluded from the model, then the profitability (ROA) grew by 0.6559%.

2. Gunung kidul shows the coefficient value of -1.1023 in which the value of c at 8.8318. Thus, when the Car, LDR, ROA, NPLs were excluded from the model, then the profitability (ROA) grew by -1.1023%.

3. Kulon progo shows the coefficient value of -0.0241 in which the value of c at 8.8318. Thus, when the Car, LDR, ROA, NPLs were excluded from the model, then the profitability (ROA) grew by -1.1023%.

4. Sleman shows the coefficient value of 0.7269 where the value c at 8.8318. Thus, when the Car, LDR, ROA, NPLs were excluded from the model, then the profitability (ROA) grew by 0.7269%.

5. Yogyakarta indicates the coefficient value of -0.2564 in which the value of c at 8.8318. Thus, when the Car, LDR, ROA, NPLs were excluded from the model, then the profitability (ROA) grew by -0.2564%.

In the model estimation above, it appears that the effect of variable cross-section that is different in every county and city in DIY on the financial performance Conventional BPR. District of Bantul, Kulon progo and Sleman has the effect to the cross-section

which is positive, which has a coefficient equal to 0,462 respectively; 0.337; and 0.398. Meanwhile, Gunung kidul regency and Yogyakarta have the effect of negative cross-section, which is -0.646 and -0.550. Moreover, with the addition of the effects of time in the analysis model also gives a different effect in each month of BPR financial performance in DIY. If the views of the independent variable, only the variable Loan to Deposit Ratio was not significant Conventional BPR on the financial performance in DIY. While other variables, ie Non Performing Loan, Capital Adequacy Ratio and ROA of each significant to the financial performance (return on assets) Conventional BPR in DIY. The increase in the ratio of non-performing loans (non-performing loans) of 1% would lower the return on assets ratio amounted to 0.123%. So also with variable BOPO rise of 1% would lower the return on assets ratio amounted to 0.152%. While variable rate capital adequacy ratio (Capital Adequacy Ratio), while increasing the ratio of 1% would raise Return on Assets ratio amounted to 0.047%. Value of determination (R-Squared) in the estimation amounted to 0.841, which means that the endogenous variable variation can be explained by the independent variables in the equation of 84.1% and the remaining 15.9% is explained by other factors outside the equation. If seen visit of the F-test, the overall effect caused by the independent variable (free) to the dependent variable (dependent) is good.

1. Statistic Test (T Test)

**Table 4.8.**
**Statistic test**

| Variabel | t-statistik | Koefisien Regresi | Prob | Standar Prob |
|---|---|---|---|---|
| **CAR** | 2.428481 | 0.053865 | 0.0162 | 5% |
| **LDR** | 1.553739 | 0.008610 | 0.1220 | 5% |
| **BOPO** | -8.460719 | -0.090044 | 0.0000 | 5% |
| **NPL** | -4.797087 | -0.183952 | 0.0000 | 5% |

*Source: Results of data processed in 2016*

To determine whether the independent variables (CAR, LDR,BOPO and NPL) have a relationship to ROA, it is necessary to test using statistical tests which include:

a. CAR influence on ROA

The analysis showed that the variables CAR own counted equal to 2.428481 and has a probability of 0.0162 <0.05 then a CAR variable individually has positive effect relationship significantly to the profitability of the BPR in Yogyakarta entirely. Variable CAR has a regression coefficient of 0.053865 showed that CAR has positive influence on ROA at RB in the districts. This means that if CAR rose 1 percent, it would influence towards ROA as of 0.053865 %. Results of previous studies conducted Agus Suyono (2005) and Bambang Sudiyatno and Teak Suroso (2010) CAR positive and significant impact on ROA. Results were the same as has been suggested by Sabir et al (2012). The amount of capital a bank will obviously affect the number of productive assets, so that the bank's asset utilization will also increase. With increasing asset utilization bank, then the bank would be easier to manage so as to increase the profit of the bank. Additionally, pharmaceutics bank capital will also improve the resilience of banks and the current economic crises may also increase the confidence of the people against the banks themselves.

b. LDR influence on ROA

Based on the results of the analysis indicate that the variable ROA has counts equal to 1.553739and has a probability of 0.1220>0.05 percent. Then the BOPO variable individually has positive effect relationship not significantly to the profitability of the BPR in five districts in Yogyakarta. Variable BOPO has a regression coefficient of 0.008610 shows that BOPO has a positive effect on profitability (ROA). This means that if LDR decreased by 1 percent it not affect the ROA to percent.

c. BOPO influence on ROA

Based on the results of the analysis indicate that the variable ROA has counts equal to-8.460719and has a probability of 0.0000 <0.05 percent. Then the BOPO variable individually has positive effect relationship significantly to the profitability of the BPR in five districts in Yogyakarta. Variable BOPO has a regression coefficient of -0.090044. shows that BOPO has a negative effect on profitability (ROA). This means that if BOPO decreased by 1 percent it would affect the ROA -0.090044persen.

d. NPL influence on profitability (ROA)

Based on the results of the analysis showed that the counts for -4.797087and has a probability value of 0.0000 < 0.05. That means, NPL has a significant effect on the ROA. Variable NPL has a regression coefficient of -0.183952, which means if there is a 1 percent reduction in the NPL variable, it will then affect the ROA -0.183952percent.

2. Simultaneous Test (F-statistic)

F test is used to determine the significance of independent variables on the dependent variable overall based on the results of analysis using Eviews 7.0 software, the value of F probability of 0.00000 to the provisions of alpha 5 percent. So we can conclude that all independent variables together significantly influence the dependent variable. The CAR, ROA and NPL variable is jointly significant towards profitability of Rural Banks in 5 districts of Yogyakarta

3. R-Squared

R-Square value or the coefficient of determination is useful to measure the ability of the model to describe the set of dependent variables. Coefficient value determination is represented as a number between 0 and 1. The small value of

coefficient determination means the ability of independent variables on the dependent variable variation is very limited, while a value close to 1 mean these independent variables that provide almost all the information needed to predict the dependent variable. From the results of the data obtained using the Fixed Effect Model R-squared value of 0.533232, meaning of 0.533232 or 53.3% of independent variables (CAR, ROA and NPL) affect the ROA and the remaining 47.7% influenced by independent variables apart from this study.

## F. Theory Test (Economic Interpretation)

Based on research results or estimation model above, it can be made of analysis and discussion of the effect of independent variables (CAR, LDR, BOPO and NPL) to profitability BPR in the districts in the Yogyakarta region consisting of Bantul, Gunung kidul, Kulon progo, Sleman and Yogyakarta as interpreted as follows:

1. CAR influence on profitability (ROA)

   Based on the research results, X1 (CAR) showed a positive and statistically significant at the five percent level of confidence for the District in Yogyakarta. CAR variable has a positive coefficient which means that the variable CAR and ROA has a positive relationship. CAR has a coefficient value of 0.053865, which means if there is an increase of 1% CAR value, then affects the level of ROA amounted to 0.053865%,

   A positive and significant relationship is also shown between CAR and ROA which can be observed from the value of profitability of 0.0162. This positive relationship is meant that when variables at the right side of model (independent variable) are increasing or decreasing, then variables on the left side of model will align in the same direction.

High CAR shows that banks have high capital adequacy. With high capital banks can be free to put their funds into a profitable investment so that it is able to increase customer confidence because of the possibility of the bank earns high profits and the possibility of the bank liquidated is also small. If capital is adequate, it is expected that losses can absorb and the bank's business activities will not experience such significant turbulence. CAR positively influencing on ROA also increased. The results are consistent with research conducted by Poncho (2008) and Setiawan (2009) that the bigger the CAR then higher increase of ROA will follow.

2. LDR influence on profitability (ROA)

Loan to Deposit Ratio (LDR) is not significant positive effect on the financial performance of the bank (ROA). The results of this study are not consistent with the concept and logic operations of the bank, where the increase in funds lent to customers will improve bank performance (ROA). The results are consistent with research conducted by Werdaningtyas (2002) and Yuliani (2007). On contrast, Suyono(2005) and Merkusiwati (2007), who found that the Loan to Deposit Ratio (LDR) is positive and significant impact on the performance of banks ROA. Efforts to be made by management to improve the bank's performance ROA is to improve the quality of credit or loans to customers through a credit customer ratings tighter for NPL pressing, so as to reduce or avoid credit problems.

3. BOPO influence on profitability (ROA)

BOPO showed a negative and significant sign statistically at the five percent confidence level for BPR. Variable BOPO have negative coefficient mark that means that the variable ROA and BOPO have a negative relation. BOPO has a coefficient value of-0.090044,-0.090044which means if BOPO decreases by 1%, then it will affect the level of -0.090044% ROA.

A negative and significant relation is also shown between BOPO and ROA that implies from profitability value of 0.0000. This negative relation means that variables on the right (independent variables) have increment / decrease, variables on the left will follow in the same direction.

Statistical test results obtained from the t-statistic value of -8.460719 and significant value of 0.0000 < 0.05. Negative values indicated BOPO is accordant with the theory underlying the smaller BOPO is will indicate the more efficient bank is in carrying out its business activities. Based on above estimation, it can be seen that the ratio of ROA has a negative and significant impact on financial performance (Return On Assets) in Conventional BPR in DIY.

The results of this study may strengthen some of the results of previous studies, such as studies conducted by Sukarno and Syaichu (2006), Akhtaretc (unpublished) and Mahardian (2008) which stated that the level of bank efficiency is reflected from the ratio of BOPO negatively and significantly influence towards ration of ROA.

The negative influence between BOPO ratio and ROA shows that if banks are increasingly efficient in conducting its operational activities (BOPO ratio is low) then obviously it can improve its financial performance (ROA ratio will rise). Conversely, financial performance (Return On Assets) of banks would be lower if the bank is inefficient in running operations (BOPO ratio is high). This condition can occur as a result of the operational costs of banks that are too big that cannot be suppressed by operating income so as to reduce the profitability of the operations of the bank itself.

The operating efficiency of a company (in this case is BPR) is a very important and crucial factor for the survival of the company. In accordance with its

function as an intermediary party, the efficiency of operations of the bank will lead to increment of bank's profits. The level of bank efficiency in running operational, affects the level of income attained by the bank. Any increase in the operational costs of banks that are not followed by an increase in operational income will result in less profit before tax, which in turn will lower ROA. This is also supported by Dewi (2010) and Yuliani (2007) which stated in their research that the more efficient operational of bank's performance is, the greater bank will benefit.

4. NPL Influence on Profitability (ROA)

NPL showed a negative and statistically significant at the five percent level of confidence for the districts in Yogyakarta province. NPL variable has a marked-negative coefficient, which means that between NPL and ROA variables have negative correlation. NPL has a coefficient value of -0.183952-, -0.1839520.159209, which means that in case of decrement of 1% will affect ROA to -0.183952%. Negative and significant relation is also shown between NPL and ROA that can be seen from the profitability of 0.0000.

If the NPL increases, it means an increase in non-performing loans due to bottlenecks in the repayment. The occurrence of non-performing loans will affect the decrease of company profit, so NPL has a parallel direction (negative) towards profitability, a test relevant to the research found by Mabvure et al. (2012) that NPL is partially affecting negative towards profitability.

## CONCLUSIONS

Based on the results of the analysis and study in previous chapters, several conclusions can be obtained as in the followings:

1. Based on Testing Results of First Hypothesis (H1) it is CAR the variable has positive influence on ROA of BPR with coefficient value of 0.053865%. Significant value of 0.0162 and t-statistic of 2.428481 shows CAR have positive effect and significant effect towards ROA of BPR.
2. Based on Testing Results of Second Hypothesis (H2), it is LDR (Loan to Deposit Ratio) the variable has positive influence on ROA of BPR with coefficient value of 0.008610% and not Significant value of 0.1220and t-statistic of 2.428481 shows , LDR have positive effect but not significant effect towards ROA of BPR.
3. Based on Testing Results of First Hypothesis (H3) it is BOPO the variable has negative influence on ROA of BPR with coefficient value of -0.090044%. Significant value of 0.0162 and t-statistic of -8.460719 shows BOPO have negative effect and significant effect towards ROA of BPR.
4. Based on Testing Results of First Hypothesis (H4) it is NPL the variable has negative influence on ROA of BPR with coefficient value of -0.183952. Significant value of 0.0000and t-statistic of -4.797087 shows NPL have negative effect and significant effect towards ROA of BPR.

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