



**Identification of Non Performing Financing Alteration Measured by Microeconomic Variable Sharia Banking**

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**Abstract**

*This study analyze the factors affecting Non Performing Financing (NPF) in the sharia bank in Indonesia. The independent variable in this research uses microeconomic variables such as Capital Adequacy Ratio (CAR), Return on Assets (ROA), Financing to Deposit Ratio (FDR), Productive Financing Ratio (PFR), and Earning Asset Quality (EAQ). The sample used in this research is all population of Sharia Commercial Bank in Indonesia. The data used in this study were obtained from the Sharia Banking Statistics Report issued by the Financial Services Authority (Otoritas Jasa Keuangan - OJK) with the observation period from 2015 to 2017. The results showed that simultaneously CAR, ROA, FDR, PFR, and EAQ significantly influence NPF. Partially only variable FDR and EAQ which have positive and significant influence to NPF, while CAR, ROA and PFR has no significant effect on NPF.*

**Keywords:** NPF, CAR, ROA, FDR, PFR, EAQ.

**INTRODUCTION**

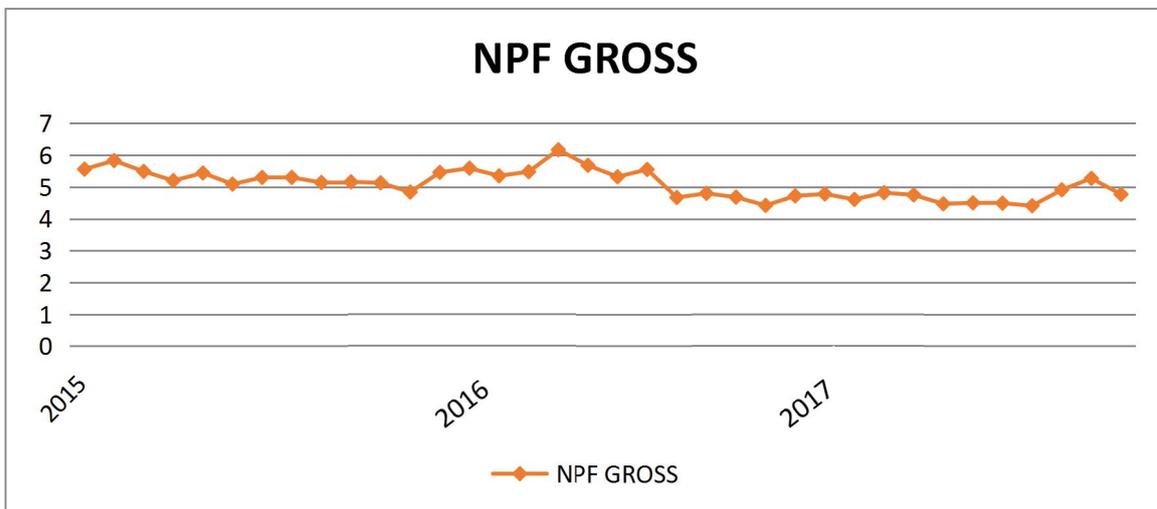
In the emerging economies, business actors tend to require additional capital to expand their business. Additional capital can be obtained from various types of financial institutions. Provision of capital for medium to large scale businesses can be met by banking services. Muhammad (2005: 15) explains that the bank as a financial intermediary service agency whose main task is to collect funds from the community is expected with the fund can meet the needs of financing funds that are not provided by private institutions or the state.

Placement of funds in the asset post as seen in sharia bank balance sheets report, the allocation of funds in the financing post has the greatest nominal compared to other asset items, this is because the bank financing post sharia can bring the highest income but on the other side the risk is also high. Rustam (2013: 55) explains credit/financing risk is the

risk due to failure of the customer or other parties in fulfilling the obligations to the bank in accordance with the agreed agreement.

In financing activities, especially for financing with 100% working capital from banks (mudharaba contract), potentially facing the risk of default is higher than other contracts. The risk may arise due to the incompetence of the management of the bank in analyzing the prospective borrower so that potentially emerging bad intentions of the debtor or deliberate done by the debtor, so that will raise the problematic financing that for the long term will harm the bank. The growth of non performing financing in sharia banks in Indonesia from January 2015 to December 2017 is as follows:

Graphic 1.  
The Growth of Non Performing Financing (NPF) in 2015-2017



Source : Sharia Banking Statistics Report in period 2015-2017

Based on the above data can be seen that the high NPF ratio is quite high faced by Islamic banks that is close to 5% until there are numbers that reach above 5%. This shows that the financing problem in sharia bank is high enough. Therefore, sharia banks must be able to manage the financing risks caused by the potential failure of other parties in fulfilling their agreed obligations. In this study, the discussion focused on factors affecting Non Performing Financing (NPF) of microeconomic variables such as Capital Adequacy Ratio (CAR), Return on Assets (ROA), Financing to Deposit Ratio (FDR), Productive Financing Ratio (PFR). Based on the above explanation then the formulation of the problem in this study are:

1. What is the Capital Adequacy Ratio (CAR), Return on Assets (ROA), Financing to Deposit Ratio (FDR), Productive Financing Ratio (PFR) and Earning Asset Quality (EAQ) simultaneously significantly influence Non Performing Financing (NPF)?
2. What is the Capital Adequacy Ratio (CAR), Return on Assets (ROA), Financing to Deposit Ratio (FDR), Productive Financing Ratio (PFR) and Earning Asset Quality (EAQ) partially significant effect on Non Performing Financing (NPF)?

### **Risk of Financing**

Understanding banks according to Law No.7 of 1992 concerning banking as has been amended with Act No.10 of 1998 explains commercial banks are banks that conduct business activities conventionally and or based on sharia principles in its activities provide services in the payment traffic (Siamat, 2005: 276). Sharia principles in question is in carrying out operational activities do not conflict with the foundation of Islamic law that is Al-Qur'an and hadith, for example the elimination of usury. The usage of usury used by conventional banks in addition to contradicting the Qur'an and hadith besides it also raises injustice both parties either shahibul maal (owner of funds) and mudharib (fund manager). In Al-Qur'an Surah An-Nisa verse 161 is explained: It means: "and they practice usury, when indeed they have been forbidden from it, and because they eat the treasures of people by unlawful means. And we provide for the unbelievers among them a painful penalty. "

The activities of Islamic banks in addition to raising funds to the community also channel funds in the form of financing to the community. Muhammad (2005: 204) explains financing means financing or expenditure ie funding issued to support planned investments, either alone or run by others. Rivai (2007: 681) describes financing or financing ie funding provided by one party to other parties to support planned investments either by themselves or institutions.

Distribution of funds by banks in the form of financing, the bank must be ready to bear the risk of financing. This is explained in Article 37 paragraph (1) of the Islamic Banking Law which states that the distribution of funds based on sharia principles by Islamic banks and Islamic Business Unit (*Unit Usaha Syariah* - UUS) has a risk of failure in congestion in order to affect the health of sharia banks and Sharia (Wangsawidjaja, 2012: 89). The risk

of financing raises the financing disbursed to the community in the event of delinquent payments by the debtor, which will have an impact on the losses suffered by the bank.

**Capital Adequacy Ratio (CAR)** is an important factor for banks in the framework of business development and accommodates the risk of loss. Capital Adequacy Ratio (CAR) is the minimum capital requirement that must be maintained by each bank as a certain proportion of total Risk-Weighted Assets (Umam, 2013: 250). The greater the amount of Capital Adequacy Ratio (CAR) then the bank has the ability sufficient to cover the risk of loss. Therefore, CAR will affect the occurrence of problem financing.

**Return on Assets (ROA)** is used to determine the ability of banks to generate profits relative to the total value of its assets. Bank Indonesia does not normally impose strict requirements on this ratio. As long as a bank does not suffer losses or there are no signs or tendencies for future losses (Umam, 2013: 257).

**Financing to Deposit Ratio (FDR)** is the ratio of financing provided by banks with third party funds successfully deployed by banks (Rivai and Arvian, 2010: 784). FDR ratio is one indicator of bank liquidity or has inverse relation with liquidity, that is if the high FDR ratio (eg above 100%) then the same condition bank liquidity will be low. Therefore, besides the bank allocates funds to the maximum financing, on the other hand the bank must also consider the need for liquidity.

**Productive Financing Ratio (PFR)** is derived from the amount of profit sharing-based financing divided by total financing. Sharia-sharing financing usually uses mudharaba and musharaka contracts. The system used by both contracts is profit sharing system, meaning that when the debtor experience profit or loss it will be divided to both parties that is bank as shahibul maal and debtor as mudharib according to ratio agreed at the time of making contract. Muhammad (2004: 26) describes the revenue share is the distribution of some portion of the profit/loss of the mutually agreed business.

**Earning Assets Quality (EAQ)** is a placement of Islamic bank funds in both rupiah and foreign currency in the form of financing, accounts receivable, qardh, sharia letters, placements, equity participation, temporary equity participation, commitments and contingencies on administrative accounts and Bank Indonesia wadiah certificates (Muhammad, 2004: 107). Assessment of the quality of earning assets is intended to assess the condition of bank assets, including anticipation or risk of default from financing that

will arise. In relation to the NPF, the better the composition or quality of the financing portfolio, the less NPF, and vice versa.

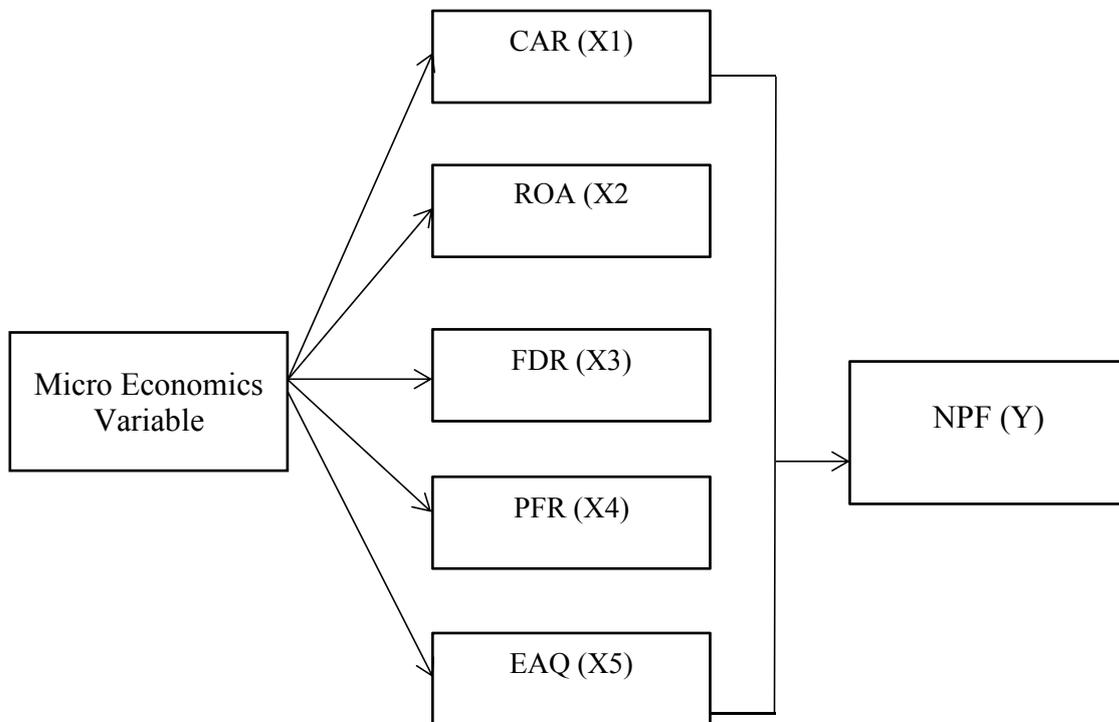
Table 1.  
Previous Reseach

Author	Year	Title	Variable	Result
<b>Zakiyah Dwi Poetry &amp; Yulizar D Sanrego</b>	<b>2011</b>	The Effect of Macro and Micro Variables on NPL of Conventional Banking and NPF of Sharia Banking	<u>Independent variable :</u>  IPI, Inflation, Exchange Rate, SWBI, SBI, LDR, FDR, CAR  <u>Dependent variable :</u>  NPL and NPF	- In the short term all independent variables have no effect on the dependent variable.  - In long-term exchange rate, IPI, Inflation, SBI, LDR and CAR affect NPL.  - In the long term, Exchange Rate, IPI, Inflation, SWBI, FDR and CAR have an effect on NPF
<b>Sri Wahyuni Asnaini</b>	<b>2014</b>	Factors Affecting Non Performing Financing (NPF) at Sharia Commercial Banks in Indonesia	<u>Independent Variable :</u>  GDP, Inflation, FDR, SBIS, CAR.  <u>Dependent Variable :</u>  NPF	- SBIS variables positively affect the NPF.  - Variable CAR has negative effect on NPF.  - Variable GDP, Inflation and FDR have no significant effect on NPF.
<b>Wahyu Saputra</b>	<b>2015</b>	The Influence of Macro and Microeconomic Variables on Financing Problems with Sharia Banks in Indonesia	<u>Independent Variable :</u>  GDP, Bank Size, FDR, FAR, and CAR.	- Variable GDP, Size bank and CAR have significant effect to NPF.  - Inflation, FDR, and FAR have no effect on NPF.

			<u>Dependent Variable :</u> NPF	
<b>Ani Nurmulyani</b>	<b>2016</b>	Analysis of Factors Affecting Non Performing Financing at BPRS in Indonesia Period of 2010-2015	<u>Independent Variable :</u> FDR, EAQ, Inflation and BI Rate. <u>Dependent Variable :</u> NPF	<ul style="list-style-type: none"> <li>- Variable EAQ and BI Rate have positive and significant effect to NPF.</li> <li>- Variable Inflation has a negative and significant effect on NPF.</li> <li>- The FDR variable has no effect on the NPF.</li> </ul>

Based on the theoretical basis and the results of previous research, then as the basis of the formulation of the following hypothesis presented the framework below.

Picture 1.  
Concept of Mind



The hypotheses in this study are:

H<sub>1</sub> : Capital Adequacy Ratio (CAR), Return on Assets (ROA), Financing to Deposit Ratio (FDR), Productive Financing Ratio (PFR) and Earning Asset Quality (EAQ) simultaneously influence Non Performing Financing (NPF).

H<sub>1</sub> : Capital Adequacy Ratio (CAR) has an influence on Non Performing Financing (NPF).

H<sub>1</sub>: Return on Assets (ROA) has an influence on Non Performing Financing (NPF).

H<sub>1</sub> : Financing to Deposit Ratio (FDR) has an influence on Non Performing Financing (NPF).

H<sub>1</sub> : Productive Financing Ratio (PFR) has an influence on Non Performing Financing (NPF).

H<sub>1</sub> : Earning Assets Quality (EAQ) has an influence on Non Performing Financing (NPF).

## **METHOD**

The type of this research is quantitative descriptive research (Kuncoro, 2001: 1). The population in this research is sharia bank industry in Indonesia. The sampling process is by nonprobability sampling method (Sugiyono, 2004: 77) with 36 samples ie January 2015 until December 2017. The type of data used in this research is secondary data (Umar, 2003: 60). The data used are publication reports in the form of Sharia Bank Statistics reports published by the Financial Services Authority. Based on the data obtained from the results of the study, the data will be collected for analysis and applied with existing theory by using analysis tool in the form of SPSS for windows version 23.0 that is by using method of multiple regression analysis and then will be taken a conclusion.

The data collection procedure is done through literature study by studying literature books, journals, papers and other sources that have relation with this research, it aims to obtain a theory that is easily accepted or understood related sharia banking industry.

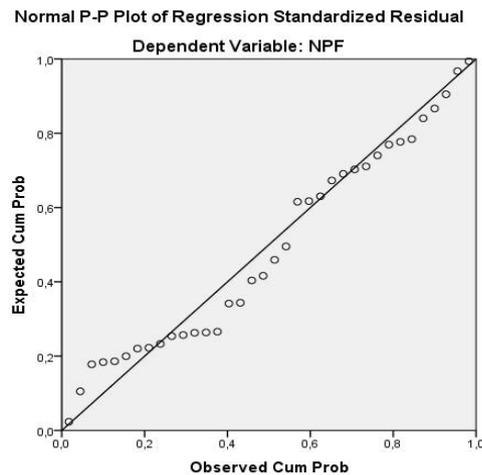
The method used in this research is classical assumption test, multiple regression, significance test, simultaneous test (F test) and partial test (t test) and test of coefficient of determination (R<sup>2</sup>), so that the result of the test can be seen whether or not the significant influence of Capital Adequacy Ratio (CAR), Return on Assets (ROA), Financing to

Deposit Ratio (FDR), Productive Financing Ratio (PFR) and Earning Asset Quality (EAQ) significantly influence Non Performing Financing (NPF).

## RESULT AND DISCUSSION

### Classical Assumption Test Normality Test

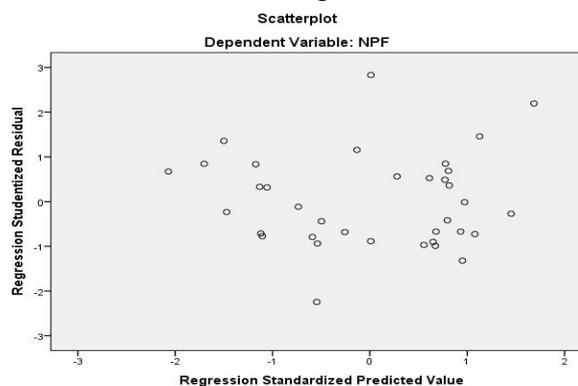
Picture 2.  
P-Plot



Normality test is used to determine whether data is normally distributed or not. Parametrical analysis such as linear regression requires that data should be normally distributed (Priyatno, 2010: 54). Based on the results of the data generated graph output Normal P-Plot shows that the data (point) spread around the diagonal line and follow the direction of the diagonal line. Shows the normal distribution pattern then the regression model meets the assumption of normality.

### Heteroskedasticity Test

Picture 3.  
Scatterplot



Heteroscedasticity test is the occurrence of variant inequality of the residuals in the regression model. A good regression model requires no heteroscedasticity problem. In this study, researchers used the Heteroscedasticity Test by looking at the pattern of points on the regression scatterplot. (Priyatno, 2010: 57). Can be seen in the picture above the point spreads randomly and spread either above or below the number 0 on the Y axis, it can be concluded that there are no symptoms of heteroskedastisitas on the regression model used.

**Multicolenierity Test**

Table 2.  
Collenearity Statistics

Model	Collinearity Statistics	
	Tolerance	VIF
(Constant)		
CAR	,211	4,736
ROA	,553	1,807
FDR	,145	6,890
PFR	,844	1,184
EAQ	,204	4,913

The multicollinearity test is the state between two independent variables or more in the regression model of a perfect or near perfect linear relationship. A good regression model requires no multicollinearity problem (Priyatno, 2010,62). From the above multicollinearity test table it can be seen that tolerance values for CAR, ROA, FDR, PFR and EAQ > 0.1 and VIF values for CAR, ROA, FDR, PFR and EAQ <10 variables can be concluded that there is no multicollinearity problem.

**Autocorrelation Test**

Table 3.  
Coefficient

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,871 <sup>a</sup>	,759	,719	,23485	,891

The autocorrelation test is a state of occurrence of the correlation of the residual for one observation with the other observations arranged according to the time series. A good regression model requires no autocorrelation problem (Priyatno, 2010: 75). To detect the presence or absence of autocorrelation of researchers using Durbin-Watson (DW test). The dL and dU values can be seen in Durbin Watson table that is dL; dU;  $\alpha$ ; n; (k - 1). Description: n is the number of samples, k is the number of variables, and  $\alpha$  is a significant level. From the Durbin Watson table it is generated for dL = 1,1755 and dU = 1.7987 so that  $4 - dU = 4 - 1.7987 = 2.2013$ . From the summary model table obtained Durbin Watson value of 0.891 indicates that the value is not contained in the range dU to 4-dU so that it can be said happened autlaherelasi problem. Therefore it is necessary to test again using nonparametic test-run test.

Table 4.  
Runs Test

	Unstandardized Residual
Test Value <sup>a</sup>	-,03691
Cases < Test Value	18
Cases >= Test Value	18
Total Cases	36
Number of Runs	11
Z	-2,536
Asymp. Sig. (2-tailed)	,011

a. Median

The result of the test run shows that the value of Asymp.sig. (2-tailed) ie  $0.011 > 0.05$  which means the null hypothesis fails to reject. Thus the data used is quite random so there is no problem autocorelation on the data tested.

### Coefficient of Determination ( $R^2$ )

Table 5.  
Coefficient

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,871 <sup>a</sup>	,759	,719	,23485	,891

Analysis of R<sup>2</sup> (R Square) or coefficient of determination used to know how big percentage contribution of independent variable to dependent variable. In regression R<sup>2</sup> is used as a measurement of how well the regression line approaches the original data value created model. If R<sup>2</sup> equals 1, then the number shows the regression line matching the data perfectly (Priyatno, 2010: 83). The coefficient of determination (R<sup>2</sup>) of 0.759 gives the understanding that the independent variables studied have a contribution influence of 75.9% to variable Non Performing Financing (NPF), while 24.1% influenced by other factors outside the variables studied.

### Multiple Linear Regression

Table 6.  
Standardized Coefficient

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	10,266	3,567		2,878	,007
CAR	-,125	,086	-,285	-1,459	,155
ROA	-,256	,222	-,139	-1,151	,259
FDR	,080	,028	,677	2,878	,007
PFR	-,007	,045	-,015	-,157	,876
EAQ	,781	,139	1,118	5,623	,000

Multiple linear regression is used to measure the magnitude of the influence of independent variables that are more than one variable to the dependent variable and predict the dependent variable by using the independent variable. Kuncoro (2001: 26) defines regression analysis as a study of the relationship of a variable called the explained variable with one or two explanatory variables. Results of the data, then the equation for multiple linear regression in this study can be written as follows:

$$NPF = 10,266 - 0,125 \text{ CAR} - 0,256 \text{ ROA} - 0,80 \text{ FDR} - 0,007 \text{ PFR} - 0,781 \text{ EAQ}$$

Interpretation of equation model as follows:

1. The value of constant 10.266 states that if the free variable (CAR, ROA, FDR, PFR and EAQ) value is zero, then the NPF is 10,27%.

2. Variable CAR of -0.125 means that if other variables are considered constant and CAR decreases by 1%, then the NPF will increase by 12.5%.
3. Variable ROA of -0.256 means if other variables are considered constant and ROA has decreased by 1%, then the magnitude of NPF will increase by 25.6%.
4. Variabel FDR of 0.080 means that if other variables are considered constant and FDR has increased by 1%, then the magnitude of NPF will increase by 8%
5. Variable PFR of -0.007 means that if other variables are considered constant and PFR decreased by 1%, then the magnitude of NPF will increase by 0.7%.
6. Variabel EAQ of 0.781 means that if other variables are considered constant and EAQ has increased by 1%, then the magnitude of NPF will increase by 78.1%

**F Test**

Table 7.  
Anova

**ANOVA<sup>a</sup>**

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	5,205	5	1,041	18,874	,000 <sup>b</sup>
Residual	1,655	30	,055		
Total	6,860	35			

a. Dependent Variable: NPF

b. Predictors: (Constant), EAQ, PFR, ROA, CAR, FDR

Test F (Anova) is used to test the effect of independent variables simultaneously (simultaneously) to the dependent variable (Prayitno, 2010: 83). In this section the variance analysis table (ANOVA) is shown. Based on the simultaneous test results above, Sig is obtained. At  $0.000 < 0.05$ , then  $H_1$  is accepted and it can be concluded that simultaneously variable Capital Adequacy Ratio (CAR), Return on Assets (ROA), Financing to Deposit Ratio (FDR), Productive Financing Ratio (PFR) and Earning Asset Quality (EAQ) have a significant effect on Non Performing Financing (NPF).

**T test**

Table 8.  
Standardized Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	10,266	3,567		2,878	,007
CAR	-,125	,086	-,285	-1,459	,155
ROA	-,256	,222	-,139	-1,151	,259
FDR	,080	,028	,677	2,878	,007
PFR	-,007	,045	-,015	-,157	,876
EAQ	,781	,139	1,118	5,623	,000

Prayitno (2010: 86) describes the t test used to test the influence of independent variables partially to the dependent variable. Based on the table above, then the partial test results (t test) can be summed up as follows:

**H1 Capital Adequacy Ratio (CAR) has an influence on Non Performing Financing (NPF)**

The CAR variable has Sig. 0.155 > 0.05 then H<sub>1</sub> is rejected, so it can be concluded that the partial CAR variable does not significantly affect the NPF. The results of this study contradict the research conducted by Saputra (2015) that the ratio of CAR has a negative and significant influence on the NPF ratio, it is reasoned that CAR shows how much the total assets of banks that contain risks financed from the it's capital. By having a good level of liquidation by the bank, it can minimize the level of problem financing that will occur.

**H1 Return on Assets (ROA) has an influence on Non Performing Financing (NPF)**

The ROA variable has a Sig. 0.259 > 0.05 then H<sub>1</sub> is rejected, so it can be concluded that the partial ROA variable does not significantly affect the NPF. ROA is the ratio used to measure the ability of banks in obtaining the profits generated from the total assets concerned. Then this ratio has no effect on NPF changes, because the calculation of ROA ratio is usually done at the end of the period after the transaction is

completed. ROA ratio can be used as a reference to problem financing. By ROA ratios firms can identify whether the financing is stuck low or high. Hajazziey (2014: 152) explains Non Performing Financing (NPF) is not a sudden, therefore monitoring is becoming increasingly important. Warning the occurrence of problematic financing can be seen from the financial statements such as ROA/ROE tends to decline. The results of this study support research conducted by Bakti (2016) which states that the ratio of ROA has no significant effect on financing.

### **H1 Financing to Deposit Ratio (FDR) has an influence on Non Performing Financing (NPF)**

The FDR variable has a Sig. 0,007 <0,05 then  $H_1$  is accepted, so it can be concluded that partially variable of FDR have significant effect to NPF. The results of this study are in accordance with research conducted by Irman Firmansyah (2014) which stated that FDR has positive and significant effect on NPF. The coefficient value of the FDR variable is positive, which means that if there is an increase in the FDR ratio, then under the same conditions the ratio of NPF will also increase. This is reinforced by the explanation of Umam (2013: 256) which states that the disbursement of funds in the form of financing compared with deposits or public savings in a bank brings the consequences the greater the risk borne by the bank concerned. In this case it shows that the ratio of FDR has a positive relationship to the ratio of NPF.

### **H1 Productive Financing Ratio (PFR) has an influence on Non Performing Financing (NPF)**

The FPR variable has a Sig. 0.876 > 0.05 then  $H_1$  rejected, so it can be concluded that the partial PFR variable has no significant effect on NPF. Productive Financing Ratio (PFR) ratio is used in financing using mudharabah contract. The concept of mudharabah bank contract as a shahibul maal provides 100% capital to the debtor's candidate (mudharib). It impacts on the financing analysis side more cautious in identifying potential borrowers. Bank managers tendency in analyzing prospective borrowers can minimize the emergence of moral hazard conducted by prospective borrowers, so that it does not have an impact on the financing bermasalah the bank. Therefore the variable Productive Financing Ratio (PFR) has no effect on Non Performing Financing (NPF).

### **H1 Earning Assets Quality (EAQ) has an influence on Non Performing Financing (NPF)**

The EAQ variable has a Sig. 0.000 < 0,05 then H1 is accepted, so it can be concluded that partially EAQ variable has significant effect to NPF and EAQ variable have positive relation with NPF. This indicates that high EAQ factors tend to be sensitive and can increase NPF ratios. Numulyani (2016) explains the higher the EAQ means the greater the PPAP that must be provided. PPAP is a reserve used to anticipate the risk of default from financing. Thus, EAQ has an influence on the ratio of NPF. The EAQ coefficient is positive which indicates that under the same conditions if the increased EAQ ratio of food will be followed by an increase in the ratio of NPF.

### **CONCLUSION**

The conclusions that can be taken from the results of research that has been done is as follows:

1. Simultaneously shows that variable of Capital Adequacy Ratio (CAR), Return on Assets (ROA), Financing to Deposit Ratio (FDR), Productive Financing Ratio (PFR) and Earning Asset Quality (EAQ) have significant effect to Non Performing Financing (NPF).
2. Partially variable Financing to Deposit Ratio (FDR) and Earning Assets Quality (EAQ) have positive and significant influence to Non Performing Financing (NPF), while Capital Adequacy Ratio (CAR), Return on Assets (ROA) and Productive Financing Ratio (PFR) has no significant effect on Non Performing Financing (NPF).

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