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**DETERMINANTS OF BANK PERFORMANCE: EMPIRICAL STUDY ON SHARIA BANK IN INDONESIA**

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**Abstract**

The development of Islamic banking has grown rapidly. This is indicated by a fairly high growth rate. Sharia banking, which was originally an alternative bank, has now become a competitive choice for customers in Indonesia. This is evidenced by the closure of the practice of conventional banks in a region in Indonesia because they prefer Sharia banks. Research on the performance of Islamic banks in Indonesia is insufficient when compared to research on conventional banks. This study reveals how the performance of Islamic banks in Indonesia with ROA as a parameter by referring to previous studies of conventional banks. Variables such as TPF, OER, NPF and FDR were selected in this study to measure their influence on the performance of Islamic banks in Indonesia. The analysis uses panel data regression to estimate the performance of the empirical model. The samples used are all Islamic banks listed on the Indonesia Stock Exchange. The results of this study indicate that the TPF, OER, NPF and FDR have a significant and significant effect on ROA. The implication of the results of this research is that although recently the growth of Islamic banking in Indonesia is quite fast, Islamic banks must continue to prove that Islamic banks can compete in the banking sector in capturing the trust of potential customers in Indonesia.

**Keywords:** Sharia bank, Return on Asset (ROA), TPF, OER, NPF, and FDR

**JEL Classification:** M210

**RESEARCH BACKGROUND**

In Law No. 7 of 1992 concerning Banking as amended by Act No. 10 of 1998 states that a bank is a business entity that collects funds from the public in the form of deposits and distributes them to the public in the form of credit and other forms to improve the standard of living of the people at large (Suryani, 2011).

Banks have an important role in an economy, namely an intermediary function. Banks act as financial intermediaries between fund owners and fund users as well as institutions that facilitate the flow of payment traffic (Nusantara, 2009). Specifically, the bank's functions are agent of trust, agent of development, and agent of services. Basically, banking activity is trust, both in raising funds and channeling funds. The sincerity of the community in depositing their funds in the bank is due to an element of trust. The community believes that their money will be safe and well managed by the bank. As an agent of development, the bank is tasked with collecting and distributing funds to smooth running of economic activities in the real sector. These bank

activities allow people to invest, distribute, and also consume goods and services. The smooth running of these investment, distribution, and consumption activities is none other than the activities of community economic development. The last function is agent of services. Apart from carrying out activities to raise and distribute funds, banks also offer other banking services to the public (Susilo, et al., 2000).

In recent years, the Islamic banking system has been highly desired by the public, especially for Muslims. This is because the Islamic banking system has different characteristics from the conventional banking system, which does not contain usury, because usury is strictly prohibited in Islam. Riba is prohibited in Islam because it is burdensome to one of the parties, usually the party borrowing funds. So, the Islamic banking system has no interest but uses a profit sharing system. The principle of profit sharing is one of the alternatives that is beneficial for banks and the public. Islamic banks prioritize the principles of fairness in transactions, ethical investment, promote the values of togetherness and brotherhood, and avoid speculative activities in transactions through financial media (Sholihah & Sriyana, 2014).

The increasing existence of Islamic banks in Indonesia is due to the high interest of the public to deposit their funds in Islamic banks and at this time it has developed into a trend. According to Bank Indonesia (2009) in the Sharia Banking Development Report, it is stated that the development of this trend is because Islamic banking fund products are attractive to depositors. The profit sharing ratio and the margin of Islamic banking fund products are still competitive compared to the interest rates at conventional banks. In addition, the performance of Islamic banking has shown a significant increase, reflected in increasing capital and profitability (Bank Indonesia, 2010).

The development of Islamic banking institutions has increased since 2011, this year there are 11 Islamic Commercial Banks operating in Indonesia. The institutional development of Islamic banks shows that it is getting better and increasing in number each year. So that in 2016, the number of Sharia Commercial Banks operating became 13 as well as 21 Sharia Business Units, and 166 BPRS.

Islamic banking is able to increase in number due to the basis of trust. The trust base is the bank's main capital in carrying out its daily activities. The public will be willing to place their funds in the bank if the bank shows its ability to increase profitability. In addition, it is mentioned by Arifin (2009) and Sudarsono (2012) that in Islamic banks, the relationship between a bank and its customers is not a debtor-creditor relationship, but a partnership relationship between the funder (shohibul mal) and the fund manager (mudharib). In this case the level of profit of Islamic banks does not only affect the level of profit sharing given to shareholders, but also has an impact on the profit sharing given to customers.

One indicator that is suitable for measuring the performance of a company is by looking at profitability. The company's ability to generate profits can be a measure of the company's performance. The higher the profitability, the better the company's financial performance. The ratios commonly used to measure the performance of profitability or profitability are Return On Equity (ROE) and Return On Assets (ROA). ROE shows the ability of bank management to

manage available capital to obtain net income, while ROA shows the ability of bank management to generate income from managing assets owned (Yuliani, 2007). Based on the above understanding, it is concluded that this ROA focuses on the company's ability to earn revenue in the company's operations, while ROE only measures the return obtained from the company's owner's investment in the business (Pratiwi, 2012).

This study serves as a benchmark to determine what factors affect bank profitability, which is ROA. This is because ROA can measure the overall financial performance, namely from the total assets owned by the bank and not only from shareholder investment (Pratiwi, 2012). Bank Indonesia acts as a supervisor and as banking supervisor to prioritize the profitability value of a bank and is measured by assets whose funds are mostly from public savings funds (Suryani, 2011). Based on other research, namely the greater the ROA of the bank, the greater the level of profit achieved by the bank and the better the position of the bank in terms of asset use (Dendawijaya, 2003).

Financial ratios that affect the rate of Return On Assets (ROA) are Third Party Funds (TPF), OER, Non Performing Financing (NPF), and Financing to Deposit Ratio (FDR).

Third Party Funds (TPF) are the main source of funds for banks to carry out their main activities. The market share of third party funds is collected by each bank individually. The higher the TPF ratio, the higher the level of public trust in Islamic banks. TPF is obtained by adding up demand deposits, savings and time deposits (Sudiyatno & Suroso, 2010).

Operational Efficiency Ratio is a comparison between total operating costs and total operating income. This ratio is used to measure the level of efficiency and ability in carrying out operational activities (Dendawijaya, 2003). The higher the OER ratio, the lower the performance. Likewise, the lower the level of the OER ratio, the better the bank management performance is (Riyadi, 2006).

Non performing financing (NPF), which is analogous to non-performing loans (NPL) in conventional banks, is a financial ratio related to credit risk. NPF is the ratio between total non-performing financing with total financing provided to debtors. The smaller the NPL, the smaller the credit risk borne by the bank (Nusantara, 2009).

Financing to Deposit Ratio (FDR), which is analogous to the Loan to Deposit Ratio (LDR) in conventional banks, is the ratio used to measure the level of bank liquidity which shows the bank's ability to meet credit demand using the total assets owned by the bank (Dendawijaya, 2003). The higher the LDR, the higher the bank's profit (it is assumed that the bank is able to channel its credit effectively). An increase in bank profits will have an impact on improving bank performance.

Research by Sudiyatno and Suroso (2010) shows that TPF has a positive effect on ROA, while Lukitasari & Kartika (2014) shows that statistically TPF has no effect on ROA. While, research by Nugroho (2011), Pratiwi (2012), and Nusantara (2009) shows that NPF or NPL has a negative effect on ROA, while Sianturi's (2012) research shows that statistically NPL which is analogous

to NPF has no effect on ROA. Research on the effect of FDR, which is analogous to LDR, also gives various results. Research by Nugroho (2011) and Pratiwi (2012) shows that FDR or LDR has a positive effect on ROA, while the research of Armereo (2015) and Suryani (2011) shows that statistically FDR or LDR has no effect on ROA.

Based on the inconsistency of the research above, it is necessary to do further research on the effect of the ratio of TPF, OER, NPF, and FDR on ROA in Islamic Commercial Banks. The research will be conducted using a panel regression model, This is different from previous studies. Panel regression model is chosen because the data to be tested is a combination of cross section and time series.

## **LITERATURE STUDY**

### **Agency Theory**

Jensen & Meckling (1976) in Agency Theory explains that there is a contractual relationship between two or more parties, where one party is called a principal who hires the other party is called an agent in performing services on behalf of the owner which includes delegation of authority. The principal party determines the delegation of responsibility for decision making to the agent. In the relationship between principal (community) and agent (banking management) in banking. The relationship between the principal and the agent is expected to maximize the principal's utility and ensure that the agent receives the reward from the results of the company's management activities. The owner cannot pay attention to overall management activities, so there is an opportunity for management to determine policies that lead to increased compensation (Armereo, 2015).

Third Party Funds (TPF) which are collected and managed by Islamic banks are inseparable from management performance to obtain the desired return. Goal Congruence is a step to control management. The management in the bank is directed not to prioritize their own interests, but there is a balance between the interests of banks and the interests of each management (Anthony & Govindarajan, 2000).

One indication of a conflict is the difference in objectives between the principal and the agent. Bank managers choose to focus on investing in companies that produce high returns in the short term rather than maximizing the welfare of shareholders through investing in long-term projects. High Non Performing Financing (NPF) in a bank is one of the factors that management lacks in providing supervision to prospective fund recipients. Management determines what procedures can be taken to avoid this. As much as possible, the internal bank is able to overcome problem loans, because credit is a risky asset owned by the bank.

### **Signaling Theory**

Broadly speaking, Signaling Theory explains that management presenting financial information (especially profit) is expected to have a positive or negative impact on its users. In signaling motivation, management tends to manage accruals which leads to earnings persistence. It is further explained that this can be done by improving the quality of financial reports through accounting numbers that lead to earnings quality. Signaling motivation provides a signal to users

of financial reports and encourages management to present earnings reports that reflect real earnings. The signal in question can be in the form of promotions or various other information stating that the bank is better than other banks (Armereo, 2015)

Managers provide information through financial reports that they have applied the principle of conservatism so that the resulting profits are quality and are not exaggerated (Jama'an, 2008). A high FDR in the financial report is useful for investors who will deposit their funds in the bank. Prospective investors pay attention to financial performance because the funds deposited will be managed as best as possible by the bank. It will be seen in the financial statements that if the OER is high and the FDR is low, it will cause concern for investors. The occurrence of problems from within and outside the bank will have an impact on the financial performance of the bank. The ineffectiveness and efficiency of the bank can be seen from how high the OER is and how much FDR. The better the bank's financial performance, the better it will have a positive impact on investors or owners to entrust their funds to the bank and it can be managed as well as possible.

### **Previous Studies**

The title of this research cannot be separated from the previous research titles as the basis for compiling the framework for this research. Several researchers examine the effect of financial ratios on bank profitability.

As research conducted by Nusantara (2009), Nugroho (2011), and Lukitasari & Kartika (2014) that LDR had a positive and significant effect on ROA. However, Sudiyatno & Suroso (2010) and Sianturi (2012) proved that LDR has no effect on ROA. The next variable studied was OER which indicated that OER had a negative and significant effect on ROA. The results of previous research were quite consistent as evidenced by Nusantara (2009), Nugroho (2011), Sianturi (2012), Pratiwi & Mahfud (2012), Sholihah & Sriyana (2014), Lukitasari & Kartika (2014) and Lemiyana & Istriani (2016). This shows that the lower the OER, the higher the resulting ROA. This proved that a bank that has a high ROA can work more efficiently than a bank that has a low ROA.

Variable CAR, which is an indicator of bank capital adequacy, has been shown in previous studies to have no effect on high or low ROA. This is evidenced by Sianturi (2012), Pratiwi & Mahfud (2012), Lukitasari & Kartika (2014) and Armereo (2015). This proves that in general, CAR does not reflect the performance of a bank.

Another very important result related to banking performance is the variable TPF. The results of research conducted by Sudiyatno & Suroso (2010) proved that the TPF had a positive and significant effect on banking performance. This means that the higher the TPF, the better the performance of a bank. These shows that in accordance with the concept and logic of the bank, namely the more TPF collected from the public, the greater the chance for the bank to get a return from the use of these funds.

The similarity of this study with previous research are used ROA as the dependent variable and the TPF, OER, NPF, and FDR independent variables while the difference is the object of this research which is sharia banks.

## **Hypothesis Development**

### **Third Party Fund (TPF)**

TPF are funds collected by banks and channeled to the public for financing. Financing is a function of the bank, namely the use of funds. The use of funds is the most important factor in banking (Muhammad, 2005). Based on research conducted by Sudiyatno & Suroso (2014), namely the more TPF collected by Islamic banks, the more funds are managed and channeled by the bank. The opportunity for Islamic banks is getting bigger to get profit sharing from the financing made. In this case, it will result in increased bank profitability. Third party funds are collections of savings, current accounts and time deposits. Third Party Funds indicate the level of trust by the community. The higher this ratio within a certain limit means that people feel safe in entrusting their funds to the bank. Based on this statement, Third Party Funds (TPF) have a positive effect on ROA.

H1: TPF has a positive effect on ROA.

### **Operating Costs to Operating Income (OER)**

OER is useful for measuring the efficiency and ability of a bank in its operating activities. The main activity of the bank is as an intermediary, namely collecting and channeling funds (Dendawijaya, 2003). The increase in operating costs results in a reduction in profit before tax which will reduce ROA. On the other hand, lower OER will result in an increase in ROA, because management is able to make good use of existing resources (Pratiwi and Mahfud, 2012). Operating costs are a number of costs incurred by the bank to carry out its main business activities (such as labor costs, marketing costs and other operating costs). Operating income is the bank's main income, namely interest income earned from placement of funds in the form of credit and other operating income (Lukitasari & Kartika, 2014). This is consistent with previous research according to Pratiwi & Mahfud (2012), Sholihah & Sriyana (2014), Sianturi (2012), Nugroho (2011), Sudiyatno & Suroso (2010), Nusantara (2009), and Lemiyana & Litriani (2016). which stated that OER had a negative and significant effect on ROA. To show the efficiency of a bank is to determine the OER rating. According to Dendawijya (2005) there were two components, namely operating income and operating expenses. Banks avoid high operating expenses because high costs will decrease bank profits. In this case, the ROA of the bank will also decrease. Management is required to minimize the high operational burden in the banking system with various alternative solutions according to the problems that arise.

H2: OER has a negative effect on ROA.

### **Non Performing Financing (NPF)**

Non Performing Financing (NPF) in Islamic banking or Non Performing Loans (NPL) in conventional banking. Pratiwi & Mahfud (2012) defined NPF as a financial ratio related to credit risk. Credit risk is bad or substandard credit. This resulted in reduced income from loans and

resulted in reduced profitability banking. The higher this ratio, the worse the Islamic bank financing will be. In this case the effect of reducing ROA in Islamic banking (Riyadi, 2006). The level of banking professionalism can be seen from how much they are able to manage their credit, so that the minimum number of banks experiences problem loans. Islamic banks must pay attention to the amount of NPF, so that good asset management is needed. NPF can be used as a fixed reference or even increase the solvency capacity (a ratio that shows a bank's ability to pay long-term debt) for banks with large capital so that it becomes one of the bases in the design of the Indonesian banking architecture without the need to be acquired by other parties (Nugroho, 2011). This is consistent with statements from Armereo (2015), Sholihah & Sriyana (2014) which stated that NPF had a negative and significant effect on ROA. Thus, bank managers are expected to be careful in choosing customers who will receive funds, so that Islamic banks are able to minimize the risk of financing so that the reduction in ROA is not too large.

H3: NPF has a negative effect on ROA.

### **Financing to deposit Ratio (FDR)**

According to Suryani (2011) FDR is a ratio used to measure bank liquidity. In this case it measures how capable the bank repays the depositor's funds which will be withdrawn. The source of liquidity is in the form of financing, namely by dividing the financing provided by the bank to Third Party Funds. The lower this ratio, the less profit sharing that the bank receives and is considered less effective. The higher this ratio is within a certain limit, the greater the impact on the results received by the bank and it is assumed that management is considered effective in managing financing which has an impact on increasing profitability (Lemiyani & Litriani, 2016). Based on the results of research conducted by Nugroho (2011), it is stated that the FDR determined by BI, it is better if banks need to maintain the range of 80% to 110%. This is consistent with the statements of Nugroho (2011), Sianturi (2012), Pratiwi & Mahfud (2012) which stated that FDR has a positive and significant effect on ROA. In the banking world, there should be a balance between the funds raised and the funds channeled. The occurrence of balance in banking will create productive conditions and avoid idle funds. Unemployed funds have an impact on decreasing opportunities for profit and it will reduce bank profitability. Liquidity management is an important part of bank operations because funds managed from third parties must be paid on maturity. FDR is a ratio that states how far the bank's ability to return funds belonging to depositors by controlling the credit provided as a source of liquidity (Dendawijaya, 2005).

H4: FDR has a positive effect on ROA.

## **RESEARCH METHOD**

### **Types of Data and Data Sources**

The type of data used in this study is secondary data. The data used in this study is panel data, which is a combination of time series and cross section data (Widarjono, 2009). Time series data (time series data) is a set of observations over a certain time span, for example weekly, monthly, quarterly, and annually. Cross section data or often called data between places or spaces is data that is collected within a certain period of time from a sample. In this study, annual data were

used which were taken from the annual financial statements reported to Bank Indonesia for the period from 2013-2016.

### **Data Collection Method**

In this study, the data collection process was carried out in two stages. The first stage, carried out through literature study, namely from previous research that examined the same problem. The second stage, carried out by collecting secondary data. To obtain secondary data, data collection techniques are obtained from internet media by downloading through the official website regarding published financial reports, namely [www.BI.go.id](http://www.BI.go.id) and [www.OJK.go.id](http://www.OJK.go.id).

### **Sample Determination**

The population in this study were all Islamic commercial banks in Indonesia registered with Bank Indonesia in 2013-2016. The sample of this research was taken by purposive sampling, namely the method of selecting samples on the characteristics of the population which have been known previously with the following criteria: (1) Sharia Bank is a Sharia Commercial Bank. (2) Islamic banks that make annual financial reports for the 2013-2016 period and have been published in OJK or BI. (3) The data required for this study are available for the period 2013-2016.

### **Operational Definition of Variables**

The variables used in this study consisted of two types, dependent variable and independent variable. The dependent variable (variable Y) is a variable whose value is influenced by the independent variable. The dependent variable in this study is the aspect of profitability as measured by ROA. ROA according to Dendawijaya (2003) is a ratio used to measure the ability of bank management in obtaining overall profits. While the independent variable (variable X) is the variable that causes the dependent variable or variables that affect the dependent variable. There are four independent variables in this study, namely TPF, OER, NPF, and FDR.

The operational definition of each independent variable is as follows:

#### **1. Third Party Fund (TPF)**

Funds collected and entrusted by the public to Islamic Commercial Banks. In accordance with the fund deposit agreement, namely, demand deposits, deposits and savings or in other forms. The more TPF collected, the more banks can use these funds to carry out activities for the community, namely financing.

#### **2. Operational Costs to Operating Income (OER)**

According to Dendawijaya (2000), Operational Cost to Operating Income (OER) is the ratio between operating costs and operating income. The OER ratio is used to measure the level of efficiency and ability of a bank in conducting operations.

#### **3. Non Performing Financing (NPF)**

Non-performing financing, analogous to non-performing loans in conventional banks, is the ratio between total non-performing financing and total financing provided to debtors (Pratiwi, 2012).



Meanwhile, non-performing loans are loans with substandard, doubtful, and bad quality (Arthesa, 2009).

#### 4. Financing to Deposit Ratio (FDR)

Financing to Deposit Ratio is a comparison between financing provided by a bank with third party funds that have been successfully mobilized by the bank (Muhammad, 2005).

#### **Data analysis method**

Analysis using panel data is a combination of time series and cross-section. Gujarati (2003) states that in order to briefly describe and explain panel data, for example in cross-section data, the values of one or more variables are collected for several sample units at a time in the panel data model, the same cross-section units are surveyed in several time. The model equation using cross-section data can be written as follows:

$$Y_i = \beta_0 + \beta_1 X_i + \epsilon_i; i = 1, 2, \dots, n$$

Where n is the number of cross-section data.

While the equation of the model with time-series is:

$$Y_t = \beta_0 + \beta_1 X_t + \epsilon_t; t = 1, 2, \dots, t$$

$$Y_t = \beta_0 + \beta_1 X_t + \epsilon_t; t = 1, 2, \dots, t$$

Note: t = amount of time-series data.

Since panel data is a combination of time-series and cross-sectional data, the model can be written:

$$ROA_{it} = \beta_0i + \beta_1 (TPF)_{it} + \beta_2 (OER)_{it} + \beta_3 (NPF)_{it} + \beta_4 (FDR)_{it} + \epsilon_{it}$$

Information:

ROA<sub>it</sub> = Return On Asset (in percent (%))

TPF<sub>it</sub> = Third Party Funds (in millions)

OER<sub>it</sub> = Operating Costs to Operating Income (in percent (%))

NPF<sub>it</sub> = Non Performing Financing (in percent (%))

FDR<sub>it</sub> = Financing to Deposit Ratio (in percent (%))

E<sub>it</sub> = Error

The advantages of panel data regression according to Baltagi (2008) are that panel data regression can solve individual heterogeneity problems, provide more informative data, reduce collinearity problems in variables, and it can produce a greater degree of freedom. It can study

dynamic changes, can identify and calculating the effect that cannot be done in a pure time series or cross section analysis, and can reduce bias in estimation due to the large number of data.

Based on these advantages, the implications are not having to do classical assumption testing in the panel data model. According to Widarjono (2009) there are three methods commonly used to solve panel data, namely fixed coefficients between time and individuals (Common Effect), constant slope but different intercepts between individuals (Fixed Effect), and estimation using the Random Effects approach.

**RESULT AND DISCUSSION**

**Selection of Regression Model**

a. Chow Test Results

**Table 1  
Estimation Chow Test**

Effect Test	Statistic	d.f	Prob.
Cross-section F	10,830797	(7,17)	0,0000
Cross section Chi-Square	54,316836	7	0,0000
Period F	3,225489	(3,17)	0,0468
Period Chi-square	14,418189	3	0,0024
Cross-Section/period F	9,255676	(10,17)	0,0000
Cross-Section/periodChi-square	59,623341	10	0,0000

From the estimation results above, which one is better to compare between the Common Effect and the Fixed Effect. Chow test is used to choose between Common Effect and Fixed Effect models. The selection is by looking at the probability F statistical value.

H0: choose a common effect model, if the probability value of F is statistically insignificant at  $\alpha$  5%.

Ha: choose a fixed effect model, if the probability value F is statistically significant at  $\alpha$  5%.

b. Hausman Test

After getting the better chow test is Fixed Effect, then it is necessary to do the next test that compares Fixed Effect with Random Effect. To choose the best model between Fixed Effect and Random Effect which will be used as a research model, it is based on the following Hausman test:

H0: choose the Random Effect model, if the probability value of F is statistically insignificant at  $\alpha$  5%.

Ha: choose a fixed effect model, if the probability value F is statistically significant at  $\alpha$  5%.

**Table 2. Estimation Hausman Test**

Test Summary	Chi-sq. Statistic	Chi-Sq d.f	Prob.
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Cross-section Random	52,187491	4	0,0000
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Based on the results above, it can be concluded that the probability of random cross section  $< \alpha$ . In this case, it shows that H0 is rejected and accepts Ha.

From the above results, it can be concluded that this study uses the Fixed Effect method.

**Classical Assumption Test**

**Table 3. Normality Test**

Value Jarque-Berra	Prob	Conclusion
1,355228	0,5072827	Normally distributed

Based on the results of testing the regression equation above, it can be concluded that the residual value of the regression equation above is normally distributed because the probability value is above 5%.

**Table 4. Heteroscedasticity**

Variabel	Prob.
ROA	0,2262
Log TPF	0,1491
OER	0,4167
NPF	0,1598
FDR	0,4067

Based on the test results above, it can be concluded that there is no heteroscedasticity because all variable probabilities are above 5%.

After determining the best model for panel data regression and passing the classical assumption test, it can be determined that the best model is Fixed Effect, here are the results of the model analysis:

**Table 5. Fixed Effect Model Result**

Variabel	Koefisien	T-Statistik	Prob.
C	7,946165	2,991834	0,0082
LogTPF	0,731017	4,586278	0,0003
OER	-0,055391	-19,52597	0,0000
NPF	0,193830	6,731775	0,0000
FDR	0,055391	3,797914	0,0014
R-squared	0,995509		
Adjusted R-squared	0,991810		
F-Statistic	269,1466		

Prob(F-statistic)	0,000000
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1. Statistical t test

From table 5 above it can be concluded that:

a. The effect of TPF on ROA

It can be seen in the Fixed Effect table, that the TPF coefficient value is 0.731017, t count is 4.586278, and the probability is 0.0003 significant at  $\alpha$  5%, so statistically TPF affects ROA (H0 is rejected and accepts Ha).

b. The effect of OER on ROA

It can be seen in the Fixed Effect table, that the OER coefficient value is -0.216685, t count is -19.52497, the probability is 0.0000 significant at  $\alpha$  5%, so statistically OER affects ROA (H0 is rejected and accepts Ha).

c. The effect of NPF on ROA

It can be seen in the Fixed Effect table, that the NPF coefficient value is 0.193830, t count is 6.731775, the probability is equal to

0.0000 is significant at  $\alpha$  5%, so statistically NPF affects ROA (H0 is rejected and Ha is accepted).

d. Effect of FDR on ROA

It can be seen in the Fixed Effect table, that the FDR coefficient value is 0.055391, t count is 3.797914, the probability 0.0014 is significant at  $\alpha$  5%, so statistically FDR significantly affects ROA (H0 is rejected and accepts Ha).

2. The coefficient of determination (R2)

The coefficient of determination (R2) is used to determine the closeness of the relationship between the variation of the independent variables (TPF, OER, NPF, and FDR) on the dependent variable (ROA). Based on the Fixed Effect table, it can be seen that the coefficient of determination (R2) is 0.995509 or 99.55%, meaning that in this model the relationship between the independent variables is strong because it is 99.55%. The value of the coefficient of determination (R2) in this study is quite good due to the large variety of independent variables that affect the size of the dependent variable in the three Islamic banks, namely Bank Muamalat, Bank Mega Syariah, Bank BRI Syariah, Bank Syariah Bukopin, Panin Bank Syariah, Bank BCA Syariah, Bank BNI Syariah, and Bank Maybank Syariah as research objects.

**Discussion**

1. The effect of TPF on ROA in Islamic Commercial Banks

TPF has a positive and significant effect on ROA, so this hypothesis is proven in accordance with the research conducted by Sudiyatno & Suroso (2010) which states that banks are better off collecting more TPF to channel and invest their funds carefully, so that they have the opportunity to get more returns. In this case, the TPF of Islamic commercial banks has an effect on the ROA of Islamic banks. Third party funds constitute the largest composition of funds sourced from the

public and affect the operational activities of a bank. One measure of the success factor of a bank can be seen from the collected third party funds. The importance of sources of funds from the wider community is because DNA is the most important for upgrading (Kashmir, 2010). Third Party Funds are collected by the bank in the form of deposits, demand deposits, time deposits or in other forms. Funds collected from the public will be allocated by banks in various forms, including for financing distribution (Sudiyatno & Suroso, 2010). The higher the Third Party Funds collected by banks, the higher the public perception of depositing their funds in the bank. Theoretically, the public trusts the bank's performance because the community volunteers to hand over their money to be managed by the bank. Banks as an intermediary institution are expected to be able to meet the criteria for liquidity, profitability, and solvency related to banking activities. In channeling of financing by banks, in practice there is a partnership relationship between the funder (shohibul maal) and the fund manager (mudharib). In this case the level of profit obtained by Islamic banks will affect the level of profit sharing for shareholders and also affect the profit sharing given to depositors of funds (depositors). Thus, it requires good investment management and asset management capabilities, which will determine the quality of the bank's business as an intermediary institution (Muhammad, 2005).

## 2. The effect of OER on ROA in Islamic Commercial Banks

OER has a negative and significant effect on ROA, so this hypothesis is proven to have an effect on ROA because it supports research conducted by Sianturi (2012), Sudiyatno & Suroso (2010), Nugroho (2011), Pratiwi & Mahfud (2012), Rahman (2009). ), and Nusantara (2009). The smaller the operational costs, the bank management is considered efficient in using existing resources in the banking system. OER is a comparison between operating costs and operating income. A healthy bank has an OER ratio of less than 1, it is better if a bank that is less healthy has an OER ratio of more than 1. The higher the cost of bank income, the more inefficient its operational activities are (Yuliani, 2007). The level of efficiency of a bank in carrying out its operations affects the level of income generated by the bank. Operational activities are carried out efficiently, the profit generated by the bank will increase. Another factor that causes the high OER ratio is due to the high funds raised. Bank management is expected to be able to overcome the things that cause the high OER ratio and it is hoped that it will be able to reduce the OER ratio so that banking performance is getting better (Restiyana & Mahfud, 2011).

## 3. The effect of NPF on ROA in Islamic Commercial Banks

NPF has a positive effect, so this hypothesis is not proven and is not in accordance with the research conducted by Pratiwi and Mahfud (2012). This indicates that the theory put forward by Arthesa (2009) which states that the higher the NPF ratio, the greater the threat of banks from non-performing loans is not necessarily true. In this case, the NPF has a positive effect, then the NPF results in an increase in ROA because the allowance for earning assets losses (PPAP) can still manage non-performing loans. In addition, bank profits can still increase because the source of bank profitability is not only focused on financing credit funds, but through leasing or other profit sharing services. It is suspected that the NPF of one of the Islamic banks has increased very high, thus affecting the test results in this study. The high increase was a result of a mistake in changing the leadership of one of the banks which resulted in policy changes and in the end the wrong strategy. In addition, NPF may occur not because the debtor is unable to pay, but the

strict regulation of Bank Indonesia in credit classification which causes debtors who were previously in the current category to decline to become substandard (Zulifiah & Wibowo, 2014). According to Bank Indonesia, the NPF value cannot exceed 5%. The higher the level of non-performing loans will affect the profitability of Islamic banks. In a study conducted by Nugroho (2011), this indicates that a high NPF in a bank will indicate that the bank is not healthy.

#### 4. The effect of FDR on ROA in Islamic Commercial Banks

FDR has a significant effect on ROA according to previous research conducted by Sianturi (2012), Nugroho (2011), Suryani (2011), Pratiwi & Mahfud (2012). FDR needs to be maintained within a certain range because in this case the financing channeled by Islamic commercial banks must be able to manage assets appropriately and to measure the liquidity of a bank. The higher the FDR within a certain limit, the higher the ROA impact. FDR affects bank profits because it is able to describe the level of financing channeled. The more the level of financing channelled, the higher the level of profit that banks get because the main source of income for the bank is from financing, it is assumed that financing is not included in the category of non-performing financing (Sianturi, 2012). Bank Indonesia has set a safe limit, which is in the range of 80% - 110%. Thus, Islamic banks are able to obtain high profitability.

#### **Conclusion**

Based on the significance test of the Common effect, Fixed Effect and Random Effect in the selection of this research model, this study uses the Fixed Effect model. So it can be concluded that Third Party Funds (TPF) are the largest funds owned by banks. TPF can be useful for developing banking business activities. The more funds raised, the banking can increase the financing that has been distributed. Regarding Operational Costs to Operational Income (OER), the smaller is the better, because banking financial performance is considered to be more efficient and the rate of Return On Assets (ROA) will be higher. Then there is a positive influence between Non Performing Financing (NPF) on ROA, so in theory there is no proven negative effect. This indicates that the Non Performing Financing (NPF) is very high in one of the research objects, so it gives different results from the previous theory. In the case of banks that are considered normal they do not reduce ROA because management is able to manage sources of profitability in other ways and not only focus on credit financing, but are able to carry out other service activities. For the variable Financing to Deposit Ratio (FDR) to ROA, theoretically proved influential. This indicates that the higher the Financing to Deposit Ratio (FDR) within a certain limit, the higher the ROA level of banks. FDR is able to describe the level of financing that has been distributed.

#### **Implications**

The implication of the result of this study is that the higher the ROA reflects the higher the strength of sharia banking in market competition, so that it is hoped that sharia banks will create positive issues, improve management in sharia banking which attracts investors to invest in increasing capital and in the end it implies an increase in bank ROA. To avoid high problem financing, the Islamic bank managers immediately took action to reduce the high number of problem financing.

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