

# Turnitin\_THE DETERMINANTS OF ROA (RETURN ON ASSETS) OF FULL-FLEDGED ISLAMIC BANKS IN INDONESIA

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**THE DETERMINANTS OF ROA (RETURN ON ASSETS) OF FULL-FLEDGED ISLAMIC BANKS IN INDONESIA****Shinta Amalina Hazrati Havidz and Chandra Setiawan***President University and President University  
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**Abstract.** The main objectives of this research is to examine the determinants of ROA (Return on Assets) of Full-fledged Islamic banks in Indonesia in the period of January 2008 – December 2011 using monthly-published report data of Central Bank (Bank Indonesia) with 3 full-fledged Islamic banks in Indonesia as 18 samples of the research. Panel Least Square is applied as the research method where those data had been tested with the classical assumption test, such as: normality, autocorrelation, multicollinearity and heteroscedasticity tests. However, the data could not fulfill the normality test, while the remaining assumption tests is fulfilled. The findings reveal that Financing to Deposit Ratio (FDR), Debt to Total Assets Ratio, Capital Adequacy Ratio (CAR), Size and Operational Efficiency Ratio (OER) have significant effect simultaneously towards ROA. Partially, FDR, DTAR, and CAR have positive effect and significant towards ROA, while size and OER have negative effect and significant towards ROA. Size is the highest coefficient among the determinant variables, while FDR is the weakest coefficient that effect ROA in the full-fledged Islamic banks in Indonesia.

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**Keywords:** return on assets , Financing to Deposit Ratio, Debt to Total Assets Ratio, Capital Adequacy Ratio, Size, Operational Efficiency Ratio

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**Abstrak:** Tujuan utama penelitian ini adalah menguji faktor-faktor penentu ROA (Return on Asset) bank syariah penuh di Indonesia pada periode Januari 2008 -Desember 2011. Data penelitian merupakan data laporan bulanan yang diterbitkan Bank Sentral (Bank Indonesia). Sampel penelitian adalah 3 bank syariah penuh di Indonesia. Penelitian menggunakan pendekatan Panel Least Square Temuan menunjukkan bahwa Pembiayaan to Deposit Ratio (FDR), Debt to Total Asset Ratio, Rasio Kecukupan Modal (CAR), Size dan Efisiensi Operasional Ratio (OER) memiliki pengaruh yang signifikan secara simultan terhadap ROA. Secara parsial, FDR, DTAR, dan CAR berpengaruh positif dan signifikan terhadap ROA, sedangkan ukuran dan OER berpengaruh negatif dan signifikan terhadap ROA. Ukuran perusahaan merupakan variable dengan koefisien pengaruh tertinggi, sedangkan FDR merupakan variable dengan adalah koefisien terlemah yang mempengaruhi ROA pada bank syariah penuh di Indonesia.

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**Kata kunci:** return on assets , Financing to Deposit Ratio, Debt to Total Assets Ratio, Capital Adequacy Ratio, Size, Operational Efficiency Ratio

## INTRODUCTION

The world has observed various evolutionary stages in the field of banking and currently we see substantial growth in Islamic modes of Banking and Finance. Islamic banking has also expanded outside the muslim world to other continents including Europe and the Americas (Abedifar, *et al*, 2011). Characteristics of Islamic banking system that operates on the principle of profit sharing provides an alternative banking system of mutual benefit for the community and the bank, and highlight aspects of fairness in trade, ethical investment, promote the values of togetherness and brotherhood in production, and avoid speculative activity in financial transactions (Subaweh, *et al*, 2012). Moreover, the characteristic of Islamic banking operation is based on partnership and mutual benefits principle provides an alternative banking system with mutual benefits both for the public and the bank. This system will give priorities to aspects related to fairness in transaction and ethical investment by underlining the values of togetherness and partnership in production, and by avoiding any speculative activity in financial transaction. By providing various products and banking services supported by variative financial scheme. Islamic banking is based on Islamic Sha'riah Law which provides all solutions of financial problems. According to Islamic law interest is totally prohibited in Islam because interest has lot of bad affects on society such as their earning capacity, purchasing power and increase poverty, unequal distribution of wealth and credit crisis in an economy (Ahmad, 2008). In sharia muslims are not allowed to receive or pay interest, which is called riba. They are encouraged to trade, invest and share profit and loss, instead. "Islamic attitudes towards ethics, wealth distribution, social and economic justice, and the role of the state". Therefore, the purpose of finance in Islam is to achieve welfare for all parties (Loghod, 2012).

13 Competition and innovation among banks are rising rapidly since they are providing financial services, all contribute to a growing interest in a detailed critical evaluation of Islamic banks. In order to maintain the regulator purpose, evaluating Islamic bank's performance is essential for its managerial. Managers are quite keen in determining the outcome previous management decisions. However, the safety and soundness of the banking industry is very concerned by the regulators to preserve public confidence. Bank's system should be monitored continuous to identify bank's problems experience. Once performance monitoring is ignored, then the problems may remain unnoticed and lead to financial failure in future. The most important issue is that the banking industry could provide the answer of: should Islamic banks be held to the same set of regulations as conventional banks? Are they relics of a bygone era, proped up by subsidies and distorsing financial-sector competition? Or are they efficient and focused financial institutions that could, if unleashed, eventually dominate the retail financial landscape? (Hassan dan Bashir, 2003)

Financial global crisis effect the banking system in Indonesia. Islamic bank that used contract sale and profit sharing system shows a different condition with conventional bank that used interest system. The impact of Financial crisis which caused the increment of interest rate effect to conventional bank's liquidity. Meanwhile, the margin rate and profit sharing of Islamic bank is not effected directly with its increment of BI rate because it will not change as long as the contract period is not finished yet and in order to change it, it must be

through new contract that agreed by both parties. It can be concluded that Islamic bank system is more stable compare to conventional bank in facing the global financial crisis. Islamic financial system which is not using interest makes its Islamic bank could hold out from the fluctuation of interest rate that caused of the decreasing rupiah's value and also its dollar is rare in market. On the other words, the financial performance of Islamic bank indicate a consistent and efficient financial condition compare to conventional bank (Sudarsono, 2009).

Banking industry has its own standard in evaluating the healthines of the bank. The standardization is utilized in order to maintain the performance of the bank since the function of banking industry itself as intermediation between the bank and the customers. Widagdo and Ika(2008) utilize accounting ratios to evaluate bank's performance since it could minimize disparity of bank's size and make them at average. Profitability ratio is applied as dependent variable where it measures the capability of bank to generate earnings as compared to its expense and other relevant costs incurred during certain period. The effectiveness of management operations is measured by the profitability. Thus, this research will apply bank's profitability as dependent variable as well. Theoretically there are some indicators to measure bank's profitability, such as: return on assets (ROA), return on equity (ROE) and net interest margin (NIM). However, this research will focus on ROA since this ratio explain the profit of the bank generally. Return On Assets (ROA) is a major indicator of profitability bank (Siraj and Pillai, 2012) and the researcher is going to measure the performance of banks through this financial ratio. This ratio is used to measure the management performance in order to achieve the whole profit. The higher ROA, the higher profit that will be achieved and the better position of using its assets. It shows how a bank can convert its asset into net earnings. The higher ratio indicates higher ability and therefore is an indicator of better performance (Samad and Hassan, 2010).<sup>11</sup>

Furthermore, there are three main types of players in the Islamic banking industry: full-fledged Islamic banks, Islamic windows of conventional banks, and Islamic finance companies. Full-fledged Islamic banks are either fully independent entities or subsidiaries of conventional banks, hold on banking licenses. Islamic windows are secluded Islamic banking departments within conventional banks. Islamic finance companies focus on supplying Sharia-compliant financing products such as auto and home finance, and are not allowed to take deposits. In terms of banking network, the number of the Islamic banks have increased to three full-fledged Islamic commercial banks, 24 Islamic banking units, and 544 branches/sub branch offices (Kasri, 2011). According to Ramadhan (2012) cited in Kasri and Kassim (2009), there are 3 full-fledged Islamic banks in Indonesia as of July 2008, those are Bank Muamalat Indonesia, Bank Syariah Mandiri, and Bank Mega Syariah.

Based on these objectives, the following research questions are developed: (a) Which among the full-fledged Islamic banks in this research (Bank Muamalat Indonesia, Bank Syariah Mandiri, and Bank Mega Syariah) that perform the best in term offinancial ratio?; (b) What factors that give significant effect and how those factors affect return on assets (ROA) of full-fledged Islamic banks in Indonesia during January 2008 to December 2011?

There are 5 independent variables as explanatory variable, those are: Financing to Deposit Ratio (FDR), Debt to Total Asset Ratio (DTAR), Capital Adequacy Ratio (CAR), size (log total assets), and Operational Efficiency Ratio (OER). The remainder of the research is organized as follows: the next section presents the literature review. The third section explains the sample, the sources of data, and the empirical model used in the study. The fourth section reports the empirical findings of the study. Section five concludes the study and provides the limitations and suggestions for future studies.

## LITERATURE REVIEW

Haron (2004), the determinants of profitability is used to be divided into two categories, namely internal and external. The factors within the bank's management control known as internal determinants. It categorizes into some aspects, such as: financial statement variables and non-financial statement variables. The factors beyond the the control of management such as inflation, gdp, competition, regulation, concentration, market share, etc is categorized into external factors. However, this research will be focusing on the internal variables with financial ratios.

Purwana (2009) in his research with the title "Analysis the Influence of Capital Adequacy Ratio (CAR), Loan to Deposit Ratio (LDR), Size, and OER to Profitability" as a comparative study of Domestic Bank and Foreign Bank in the period of January 2003 – December 2007. To examine the factors that influence its profitability, Edward uses multiple regression analysis as the method. The result for adjusted R square in Domestic banks is 0.902 which means the influence of independent variables, those are CAR, LDR, Size, and OER to dependent variable which is ROA could be explained by this equation for about 90.2 %. Meanwhile, the other 9.8 % is being influenced by other factors that excluded in this research. Otherwise, the adjusted R square for foreign banks is 0.451 which means that the independent variables influence its dependent variable for about 45.1 % and the rest is being influenced by other factors that excluded in this research. Furthermore, the independent variables have influence simultaneously to dependent variable both in domestic banks either foreign bank.

Stiawan (2009) conducted a research with the title "The Influence of Macroeconomic Factors, Market Share, and Characteristics Bank to the Profitability Islamic Banking". It is a study case of Islamic Bank in the period of 2005 – 2008. The data analysis techniques used in this study is multiple regression analysis where inflation and GDP growth as a measurement of macroeconomic factors, market share as measured by the share of bank financing, and the characteristics measured by CAR, FDR, NPF, OER, and Size to Return on Assets (ROA) Islamic banking in Indonesia. The value of adjusted R square in this research is 0.129 which means that ROA as its dependent variable could be explained by the eight factors, which are inflation, GDP growth, bank financing, CAR, FDR, NPF, OER, and Size for about 12.9 %. The rest of it which is 87.1 % is explained by other factors which excluded in this research. Additionally, as the result of F-test those independent variables have significant influence simultaneously to dependent variables which is ROA. Meanwhile, CAR and FDR have

<sup>1</sup> positive effect and significant to the ROA; NPF, OER, and Size have negative effect and significant to the ROA.

Hesti (2010) in the research of “*Analysis the Influence of Firm Size, Capital Sufficiency, Productive Asset Quality, and Liquidity to Financial Performance*” as a case study in the Islamic Bank in Indonesia started from 2005 – 2009. Data analysis used is multiple linier regressions by using *Ordinary Least Square (OLS)* method. The independent variables that used in this research are LnSize, Capital, KAP, and LIQ which are CAR as the proxy of capital, PPAP as the proxy of KAP, and FDR as the proxy of liquidity. The result of adjusted R square was 0.350 this means that ROA could be explained by those independent variables, such as LnSize, CAR, PPAP, and FDR for about 35 % and the other 65 % is explained by other variables which excluded from its research. Furthermore, the value of F-test is 8.930 which is bigger than 4 and its significant is 0.000 which is less than 0.05. In conclusion, the independent variables in this research could influence simultaneously to bank’s performance as the dependent variable which is Return on Assets (ROA). As of the partial effect, it indicates that size has positive effect and significant to the ROA, FDR has negative effect and significant to the ROA, CAR has positive effect, but insignificant to the ROA.

Kasbal (2012) found a research finding with the title “*Analysis the Influence of Capital Adequacy Ratio (CAR), Non-Performing Loan (NPL), Loan to Deposit Ratio (LDR), Net Interest Margin (NIM), and Operating Expense to Operating Income ratio (OER) to Profitability in the Banking Company in Indonesia*” which is focusing on Foreign Exchange Bank in the period of 2009-2010. The data analysis technique that used in this research is multiple regressions. The adjusted R square value in this research is 0.609 % which means that the influence of independent variables, those are: CAR, NPL, LDR, NIM, and OER to dependent variable which is ROA is for about 60.9 % and the other 39.1 % is influenced other factors that excluded in this research. Based on F-test which resulted 31.885 with the probability 0.000 which means CAR, NPL, LDR, NIM, and OER together have influence to ROA.

Sartika (2012) in the research of “*Analysis the Influence of Firm Size, Capital Sufficiency, The Quality of Productive Assets, and Liquidity to Return on Assets (ROA)*” in the study case of Islamic Conventional Banks in Indonesia from 2006 to 2010. To examine the factors that influence ROA the researcher used multiple regression analysis by using *Ordinary Least Square (OLS)* method. The independent that used in this research are Size, CAR, PPAP, and FDR which is resulted 0.671 for its R square. It means that the independent variables have 67.1 % to explain the influence to dependent variable which is ROA. Moreover, based on F-test that resulted 5.105 with 0.017 as the significance this means that those factors could influence simultaneously to bank’s performance which is ROA. Size and FDR have positive effect and significant to the ROA, while CAR have negative effect and significant to the ROA.

Rasyid (2012) a research with the title “*Analysis the Influence of Loan to Deposit Ratio (LDR), Net Interest Margin (NIM), and Efficiency to Return on Assets (ROA) in Indonesia Conventional Bank*”. Multiple linier regression is the analysis technique chosen by the researcher. The value of R square was 0.233 which means that ROA as the dependent variable could be explained by the independent variable, such as LDR, NIM and OER for

about 23.3 %. The other 48.1 % is explained by other factors which excluded in this research. Furthermore, the independent variables have significant influence simultaneously to its dependent variable.

Pratiwi (2012) by the title “*The Influence of CAR, OER, NPF, and FDR to Return on Assets (ROA) in Conventional Islamic Bank*” which is a case study in the conventional Islamic Bank in Indonesia year 2005 – 2010. Its data analysis techniques used was multiple regression which is its R square is for about 0.672. Meaning to say that the independent variables, those are CAR, OER, NPF, and FDR could explain about ROA for about 67.2 % and the rest will be explained by other factors which excluded in this research. Moreover, the results of this research shows that CAR has negative influence on ROA, but it doesn't significantly influence ROA. OER and NPF have negative and significant influence on ROA. Meanwhile, FDR variable has positive and significant influence to ROA. The t-test reveals that CAR has negative effect, but insignificant to the ROA, OER and NPF have negative and positive effect to the ROA, FDR has positive effect and significant to the ROA.

Ruslim (2012) in his research by the title of “*Analysis the Influence of Capital Adequacy Ratio (CAR), Non-Performing Loan (NPL), and Loan to Deposit Ratio (LDR) to Return on Assets in Conventional Islamic Bank that Listed in Bank Indonesia*”. The researcher used Multiple Regression as its data analysis technique and the value of R square is 0.446 which means that the independent variables, such as CAR, NPL, and LDR could explain about Return on Assets for about 44.6 % and the other 55.4 % might be explained by other factors which excluded in this research. On the other hand, CAR, NPL, and LDR have significant influence which simultaneously to dependent variable which is Return on Assets. CAR has positive effect, but insignificant to the ROA, NPL has negative and significant effect to the ROA, LDR has positive effect and significant to the ROA.

## METHOD

This research investigates the determinants of ROA (Return on Assets) of full-fledged Islamic banks in Indonesia in the period of January 2008 – December 2011 using monthly-published report data of Central Bank (Bank Indonesia) and bank reports through the websites with 3 full-fledged Islamic banks in Indonesia, those are: Bank Muamalat Indonesia, Bank Syariah Mandiri, and Bank Mega Syariah as the samples of the research. This research uses secondary aggregated data consisting of monthly financial ratio of full-fledged Islamic banks in Indonesia.

The data used are panel data and it is assumed that all behavioral differences between individual banks are captured by the intercept. A combination data of cross section and time series data is panel data or pooling and the model that will be used to analyze its data referred as data panel model (Rosadi, 2012). Meaning to say that, this research will be proceed using panel regression data in order to construct the model of research and explain the effect between Financing to Deposit Ratio (FDR), Debt to Total Asset Ratio (DTAR), Capital Adequacy Ratio (CAR), Size, and Operational Efficiency Ratio (OER) to Return on Assets (ROA). A general equation of the model is as follow:

The data full-fledged Islamic banks in this research are balanced panel data that has the same number of time-series observations for each cross-sectional unit. The researchers apply technique panel data using EViews7 with the model as follow:

$$Y_{it} = \beta_0 + \beta_1 X_{it,1} + \beta_2 X_{it,2} + \beta_3 X_{it,3} + \beta_4 X_{it,4} + \beta_5 X_{it,5} + \varepsilon_{it}$$

In which:

Y	= Return On Assets
$\beta_0$	= Intercept (value of Y when $X_1 = 0$ )
$X_1$	= Financing to Deposit Ratio
$X_2$	= Debt to Total Asset Ratio
$X_3$	= Capital Adequacy Ratio
$X_4$	= Size
$X_5$	= Operational Efficiency Ratio
$\beta_1$	= Determine the contribution of FDR (Coefficient regression of FDR)
$\beta_2$	= Determine the contribution of DTAR (Coefficient regression of DTAR)
$\beta_3$	= Determine the contribution of CAR (Coefficient regression of CAR)
$\beta_4$	= Determine the contribution of Size (Coefficient regression of Size)
$\beta_5$	= Determine the contribution of OER (Coefficient regression of OER)
i	= Total number of banks
t	= Total number observations for each bank
$\varepsilon$	= Error = Variables effect the value of Y but not includes in the study

According to Johnson (2003), explained that R-squared- measures the success of the regression in predicting the values of the dependent variable within the sample. In standard settings, may be interpreted as the fraction of the variance of the dependent variable explained by the independent variables. The statistic will equal one if the regression fits perfectly, and zero if it fits no better than the simple mean of the dependent variable. It can be negative for a number of reasons. Probability is also known as p-value or the marginal significant to reject or accept the null hypothesis. This research will apply 10% significant level. F-test examines the effect of all independent variables, such as; Financing to Deposit Ratio (FDR), Debt to Total Assets Ratio (DTAR), Capital Adequacy Ratio (CAR), Size (Log total assets), and Operational Efficiency Ratio (OER) simultaneously towards its dependent variables, Return on Assets (ROA). Meanwhile, T-test examines the effect of each independent variable towards dependent variable by comparing the value of significant t of each independent variable with significant standard = 0.1.

There are 6 hypotheses of the determinants of ROA of full-fledged Islamic banks in Indonesia, those are:

Hypothesis 1 : Financing to Deposit Ratio (FDR), Debt to Total Assets Ratio (DTAR), Capital Adequacy Ratio (CAR), Size, Operational Efficiency Ratio (OER) have significant effect simultaneously to Return on Assets (ROA) in the full-fledged Islamic banks in Indonesia.

Hypothesis 2 : Financing to Deposit Ratio (FDR) has positive effect to Return on Assets (ROA) in the full-fledged Islamic banks in Indonesia.



Hypothesis 3 : Debt to Total Assets Ratio (DTAR) has positive effect to Return on Assets (ROA) in the full-fledged Islamic banks in Indonesia.

Hypothesis 4 : Capital Adequacy Ratio (CAR) has positive affect to Return on Assets (ROA) in the full-fledged Islamic banks in Indonesia.

Hypothesis 5 : Size has negative effect to Return on Assets (ROA) in the full-fledged Islamic banks in Indonesia.

Hypothesis 6 : Operational Efficiency Ratio (OER) has negative effect to Return on Assets (ROA) in the full-fledged Islamic banks in Indonesia.

Beforehand, classical assumption test is processed to examine the normality, autocorrelation, multicollinearity and heteroscedasticity problems. Normality test measurement through Jarque-Bera test is a statistic test whether the series is normally distributed. Skewness and kurtosis will determine the normal distribution with the equation as follows:

$$\text{Jarque - Bera} = \frac{N}{6} \left( S^2 + \frac{(K - 3)^2}{4} \right)$$

Where S is the skewness and K is the kurtosis. Descriptive statistic will define the Jarque-Bera score and the determination is that when J-B score is insignificant (less than 2) with more than 10 percent probability, it is considered as normally distributed (Winarno, 2011). Autocorrelation test determines the correlation among times series since problem might arise if the previous and next data correlated each other. Durbin-Watson is a common test of autocorrelation test by defining positive autocorrelation problem when DW score is less than -2 ( $DW < -2$ ), negative autocorrelation problem when DW score is bigger than +2 ( $DW > +2$ ) and no autocorrelation problem when DW score is between -2 and +2 ( $-2 \leq DW \leq +2$ ). The correlation among independent variables determined by multicollinearity test. Same concepts or phenomenon among independent variables lead to multicollinearity problem with large number that incorporated in regression model. This research will test the multicollinearity problem by employing matrix correlation that interpret through R value. The association strength is measured by the sample of multiple correlation coefficients (R) with the score between 0 to +1. There are 3 determinations of association among independent variables, such as: 0.25 as weak association, 0.5 as moderate association and 0.9 as strong association. Thus, it is expected to have correlation among independent variables when the score exceeds 0.9 and the variables will be dropped to solve multicollinearity problem (MTSU, 2012). In order to have constant residual value that usually occurs on the cross-section data rather than time series data, heteroscedasticity test will be tested in this research. White test is the most useful and quite common for heteroscedasticity test. The equation for white test is  $W = nR^2$ , where n is the observation and  $R^2$  is the coefficient determination value from the dummy regression equation between residuals (as dependent variable) with dependent variables, square and the interaction between independent variables with the tested regression model (Rosadi, 2012).

## FINDINGS AND RESULT

The regression results will be revealed on the table below by using EViews7 software. The researchers use Return on Assets (ROA) as the dependent variable, while Financing to Deposit Ratio (FDR), Debt to Total Assets Ratio (DTAR), Capital Adequacy Ratio (CAR), Size, and Operational Efficiency Ratio as the independent variables.

Table 1. reveals that Bank Syariah Mandiri (BSM) has the best performance among the other two full-fledged Islamic banks. As of the financial ratios, BSM could achieve the best result in term of ROA, DTAR, Size and OER. It means that, BSM could maintain the performance very well and it could attract the investors to invest. Moreover, Bank Mega Syariah (BMS) is on the second rank that could maintain the performance in term of FDR and CAR. Meanwhile, Bank Muamalat Indonesia (BMI) does not show any good result in term of financial ratios compare to the other two full-fledged Islamic banks in Indonesia.

**Table 1.** Variables Comparison based on Investor's Perspective

Variable	BMI	BSM	BMS	The Best Ratio		
				BMI	BSM	BMS
ROA	0.846	1.136	1.053		√	
FDR	98.003	89.525	103.859			√
DTAR	92.177	93.156	90.597		√	
CAR	11.942	12.499	13.204			√
Size	7.206	7.368	6.565		√	
OER	85.339	82.538	88.115		√	

Source: Adjusted by researcher based on descriptive statistic results of each bank

Table 2. explain the mean, median, maximum and minimum score of each variables. Overall, the ratios have fulfill the standard of each ratio that has been determined by central bank of Indonesia. Thus, the variables is good enough and the full-fledged Islamic banks in Indonesia are healthy. Further, as the Jarque-Bera score and its probability reveals that none of the variables are normally distributed. As an empirical result, non-normal data is commonly happen in the financial research. Researchers may misunderstood the concept of six sigma where all collected data to be utilized as analysis should distributed normally (Butthmann, 2012). Incorrectly, t-test and linear regression are only valid for normal distribution data which is widely understood by the researchers. Further literature summarize that once the regression and t-test are utilized for large samples, so it can perform well without considering whether the data are normally distributed or not. Sufficiently large sample is often under 100. Hence, this research could ignore non-normal distribution results since the observations is over 100. Non-normality outcomes variables are rarely necessary to worry about. It is better to consider heteroscedasticity in regression (Lumley, *et al*, 2002). As of the heteroscedasticity result by white test, it indicates no heteroscedasticity problem (refer to Table 4).

**Table 2.** Descriptive Statistics

	ROA	FDR	DTAR	CAR	SIZE	OER
Mean	1.012	97.129	91.977	12.548	7.047	85.331
Median	0.922	97.407	92.147	12.174	7.172	85.476
Maximum	6.165	120.320	94.410	18.466	7.688	99.760
Minimum	0.001	79.091	86.534	8.039	6.313	-15.849
Std. Dev.	0.700	8.408	1.615	1.790	0.373	10.073
Skewness	2.829	0.284	-1.351	0.839	-0.400	-7.097
Kurtosis	21.513	2.393	5.197	4.766	1.923	71.958
Jarque-Bera	2,248.521	4.144	72.748	35.588	10.803	29,739.77
Probability	0.000	0.126	0.000	0.000	0.005	0.000
Observations	144	144	144	144	144	144

Source: proceed data by Eviews7

Table 3 explain the correlation between independent variables where size and debt to total assets ratio (DTAR) indicates as the highest correlation among other variables. The score is 0.706 that indicates as moderate association which is between 0.5 and 0.9. referring to the result above, the researchers conclude that there is no multicollinearity problem since none of the independent variables classified into the strong association which is 0.9. Hence, all the independent variables are able to be utilized in this research.

**Table 3.** Matrix Correlations of Independent Variables

	FDR	DTAR	CAR	SIZE	OER
FDR	1.000	-0.580	0.172	-0.670	0.037
DTAR	-0.580	1.000	-0.663	0.706	0.046
CAR	0.172	-0.663	1.000	-0.334	-0.057
SIZE	-0.670	0.706	-0.334	1.000	-0.114
OER	0.037	0.046	-0.057	-0.114	1.000

Source: proceed data by EViews7

All the classical assumption test is tested, but only normality test could not be fulfilled. However, this may not lead to problem since the observation is categorized into large data. Therefore, the regression by panel least square is employed to prove the empirical study of the research as follows:

Based on the table above, the value of R square is 0.508. It means that the variations of independent variables, such as; Financing to Deposit Ratio (FDR), Debt to Total Asset Ratio (DTAR), Capital Adequacy Ratio (CAR), Size, and Operational Efficiency Ratio (OER) could explain its variation of dependent variable, Return on Assets (ROA) for about 50.8 %. Meanwhile, the remaining 49.2 % is explained by other factors that excluded in this research. In order to answer the first hypothesis, it reveals that the probability of F-statistics is 0.000.

**Table 4.** Panel Least Square of Full-Fledged Islamic Banks in Indonesia

Dependent Variable: ROA

Method: Panel Least Squares

Date: 12/09/12 Time: 17:43

Sample: 2008M01 2011M12

Periods included: 48

Cross-sections included: 3

Total panel (balanced) observations: 144

White cross-section standard errors and covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-13.917	5.161	-2.697	0.008
FDR	0.026	0.008	3.360	0.001
DTAR	0.186	0.049	3.840	0.000
CAR	0.081	0.034	2.372	0.019
SIZE	-0.238	0.135	-1.756	0.081
OER	-0.048	0.002	-19.653	0.000
R-squared	0.508	Mean dependent var		1.012
Adjusted R-squared	0.490	S.D. dependent var		0.700
S.E. of regression	0.500	Akaike info criterion		1.492
Sum squared resid	34.479	Schwarz criterion		1.615
Log likelihood	-101.406	Hannan-Quinn criter.		1.542
F-statistic	28.520	Durbin-Watson stat		0.660
Prob(F-statistic)	0.000			

Sources: proceed data by EViews7

Estimation Command:

LS(COV=CXWHITE) ROA C LDR

DTAR CAR SIZE OER

Estimation Equation:

ROA = C(1) + C(2)\*LDR + C(3)\*DTAR

+ C(4)\*CAR + C(5)\*SIZE + C(6)\*OER

Substituted Coefficients:

ROA = -13.9170237024 +

0.0259337667872\*LDR +

0.186410141243\*DTAR +

0.080849529876\*CAR -

0.237578126864\*SIZE -

0.0477655904146\*OER

Since the  $t$ -value of significant is lower than 0.1000, it indicates that the independent variables, such as; Financing to Deposit Ratio (FDR), Debt to Total Asset Ratio (DTAR), Capital Adequacy Ratio (CAR), Size, and Operational Efficiency Ratio (OER) have significant effect simultaneously to its dependent variable, Return on Assets (ROA). Thus, the first hypothesis (H1) is accepted that support the previous researches; Stiawan (2009), Hesti (2010), Ruslim (2012) and Sartika (2012). Return on Assets (ROA) is the proxy of profitability ratio that measures the efficiency management of the bank. It shows how the bank converts its assets to generate the whole profit.

The  $t$ -statistic value of FDR is 3.360 with 0.001 as the probability. It means that FDR has positive effect and significant to ROA in the full-fledged Islamic banks in Indonesia. The increasing value of FDR will increase the value of ROA as well. Financing to Deposit Ratio (FDR) measures the liquidity of bank, the higher ratio of FDR indicates that the bank is not liquid. Once the bank is not liquid, then they would face high risk of liquidation and the bank could not fulfill the obligation as well. That case would affect the level of customer's trust to the bank. The decreasing level of trust would lead customers to draw their money, when they draw their money, the profitability will decrease. However, it shows good results of FDR, thus, the second hypothesis (H2) is accepted that support the previous researches; Stiawan (2009), Pratiwi (2012), Sartika (2012), and Ruslim (2012).

The third hypothesis is accepted as well that the probability value is 0.000 and 3.840 as the  $t$ -statistic value. It means that Debt to Total Asset Ratio (DTAR) has positive effect and significant to ROA in the full-fledged Islamic banks in Indonesia. ROA will increase when DTAR increase as well. Since banking industry received the money from the customer, they are relying on customer's saving. The more customers, the more saving that the bank will be receiving and those funds will be the profit sharing where it could increase the profitability of the bank. Thus, the third (H3) hypothesis is accepted.

Capital Adequacy Ratio is the sufficiency of its capital where shows the bank's ability in maintaining the sufficient capital and the abilities of bank management in identifying, measuring, supervising, and controlling the risks that will be happened which will affect to the amount of its capital (Kasbal, 2012). As the standard of Bank for International Settlements (BIS), stated that the minimum value of its capital is for about 8 % and it will categorized as a healthy bank. Based on table 4.2 it reveals the CAR probability for 0.019 with 2.372 as the  $t$ -statistic value. It indicates that the fourth hypothesis (H4) is accepted. The increasing value of CAR will increase the value of ROA as well since those variables have positive and significant effect. This research has the same results with the previous researches and supports those researches they are Stiawan (2009) and Kasbal (2012).

Firm size is a tool to measure the size or the standard asset of its company. A company that has big amount of asset has big possibilities to achieve the higher profit. This research is appropriate with the research that had been done by Minh and Tripe (2002) which the result of the research is size has positive effect to profitability. The same result is shown by Short (1979), Smirlock (1985), and Akhavein (1985) where stated that there is positive effect and significant between firm size and total asset that proxy as the logarithm of total assets. However, that research is incompatible with Athanasoglou (2005) that explained regarding the effect of size to the increasing of profitability is just happened in some aspects. In fact, a

bank which grows being a larger firm resulted in a negative effect of size to its profitability (Stiawan, 2009). As of the research results, 0.081 indicates as the probability value, while -1.756 indicates as the t-statistic value. It supports the finding of Athnasoglou that size has negative effect to ROA. Thus, the fifth hypothesis (H5) is accepted that the increasing value of size will decrease the value of ROA since the bank could not maintain the assets once they are growing into bigger bank. Briefly, size has negative effect and simultaneously to ROA in the full-fledged Islamic banks in Indonesia. This research supports the previous research that had been done by some researchers; they are Purwana (2009) and Stiawan (2009).

Operating Expense Ratio (OER) is used to measure the efficiency level and bank's ability while executing the operational activities. The lower value of Operational Efficiency Ratio will indicate as better performance of its bank in operating the business activities (Kasbal, 2012). The probability value of OER is 0.000 and the t-statistic value is -19.653 which means that OER has negative effect and significant to ROA. Thus, the research result supports the theory that Operational Efficiency Ratio (OER) has negative effect and significant to the ROA in the full-fledged Islamic banks in Indonesia. It means that the sixth hypothesis (H6) is accepted. The result of its research has the same result with the previous; Purwana (2009) and Stiawan (2009).

## 24 CONCLUSION

14 Based on the results of descriptive statistic of each bank, it shows that the full-fledged Islamic banks in Indonesia, such as: Bank Muamalat Indonesia (BMI), Bank Syariah Mandiri (BSM) and Bank Mega Syariah (BMS) are maintaining their performance good enough, but BSM shows the best performance compare to BMI and BMS. BSM could achieve the best financial ratios in term of ROA, DTAR, Size, and OER. It means that out of 6 financial ratios that utilized in this research, BSM could maintain 4 ratios as the best result. The second rank is BMS that shows the best result in term of FDR and CAR. Meanwhile, BMI does not have any record for its best performance of financial ratios among the other counterparts of Islamic banks.

The fourth classical assumption test is measured to define normality, autocorrelation multicollinearity and heteroscedasticity. This research doesn't fulfill the normality test, but it is not a matter to worry about because the purpose of the research is not about predicting future that might happen. The remaining assumption tests are fulfilled and a further objective which is regression could be tested. Regarding to the F-test result, the probability value of its F-statistic is 0.000 where it is lower than 0.10 ( $0.000 < 0.10$ ), thus the independent variables which are Financing to Deposit Ratio (FDR), Debt to Total Asset Ratio (DTAR), Capital Adequacy Ratio (CAR), Size, and Operational Efficiency Ratio (OER) have significant effect simultaneously to its dependent variable, Return on Assets (ROA). Furthermore, the result of R-square is 0.508, it means that the variance of independent variables, such as: Financing to Deposit Ratio, Debt to Total Asset Ratio, Capital Adequacy Ratio, Size, and Operational Efficiency Ratio could explain about the variance of Return on Assets for about 50.8 % and the remaining 49.2 % is explained by other factors that excluded in this research.

Based on the T-test result, it reveals that the entire independent variables are appropriate to the theories where the significant level in this test is 0.01 (1%) up to 0.10 (10%) and those independent variables have significant effect partially to the dependent variable which is Return on Assets. In addition, the most explanatory power of coefficient is Size in explaining ROA, which the result is -0.238. Meanwhile, the weakest explanatory power of coefficient is FDR in explaining ROA, which the result is 0.026.

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