

CHAPTER IV

RESULT AND ANALYSIS

In this chapter, there will be some tests regarding the factors that affect the performance of Islamic banking. There are two kinds of variables, dependent and independent variable. The dependent variable is Return on Assets (ROA), while the independent variables are exchange rate, inflation, and gross domestic product. This study used the multiple regression analysis to test the hypothesis. The analytical method used by the authors to explain the basic framework of the calculation of the relationship between a dependent variable and independent variable based on a multiple regression analysis using the data processing program E-views 7.0. The variables of data are taken from the period of 2012-2015.

A. Descriptive Variables

TABLE 4.1
Descriptive variable

Indicator	ROA	KURS	INFLASI	GDP
Mean	1.392.083	12283.75	0.494792	2.89
Median	1.260.000	12307	0.375	2.97
Maximum	2.520.000	14653	3.290.000	3.08
Minimum	0.08	9.669.000	-0.36	2.86
Std. Dev.	0.708895	1.304.216	0.661877	4.01
Skewness	-0.16805	-0.58618	2.100.205	-5.858.756
Kurtosis	1.575.733	2.484.137	9.024.906	3.862.529
Jarque-Bera	4.283.004	3.281.090	1.078.859	2.812.923
Probability	0.117478	0.193874	0	0
Observations	48	48	48	48

Source : Secondary Data Processed

Based on table 4.1 shows that in this study displays the descriptive variables of the data. Dependent variables are ROA (Return on Assets) and independent variables consist of the inflation rate, exchange rate, and Gross domestic product.

From this table shows the following results: The mean values of ROA, Median, Maximum, and Minimum are respectively 1.392.083, 1.260.000, 2.520.000, and 0.08. Second, the value of the exchange rate for Mean, Median, Maximum, and Minimum are 12283.75, 12307, 14653, and 9.669.000 million. Third, the mean values for inflation, Median, Maximum, and Minimum are 0.494792, 0.375, 3.290.000, and -0.36. And the last variable gross domestic product with average values for gross domestic product are 2.89, 2.97, 3.08, and 2.86, respectively.

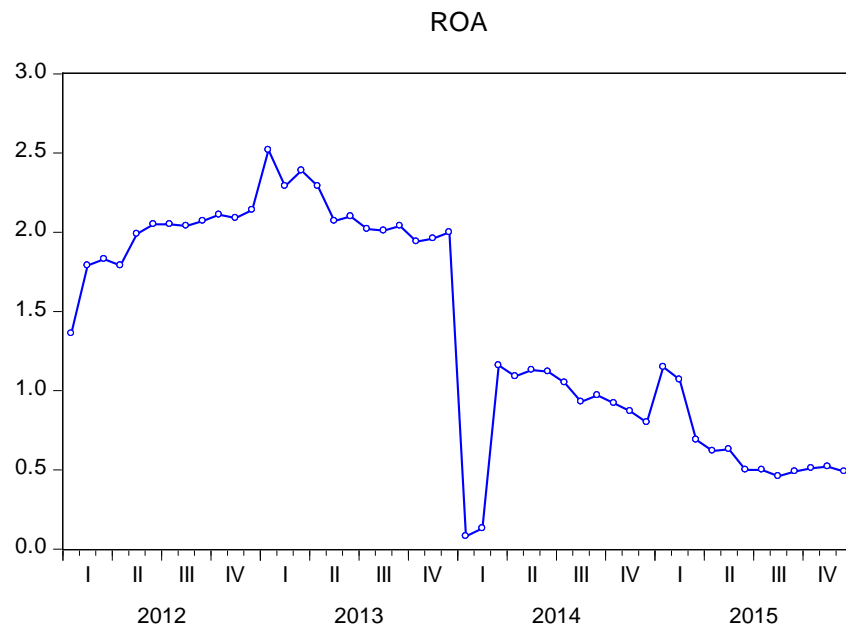
The results show that all variables show the positive, median, and maximum mean. For Skewness value, ROA, Exchange Rate, and Gross domestic product are negative, with -0.16805, -0.58618, -5.858.756. while the Skewness value for INF is positive ie, 2.100.205. and also for the value of Kurtosis ROA, Exchange Rate, Inflation, and Gross domestic product all positive variables are 1.575.733, 2.484.137, 9.024.906, and 3.862.529. While the Jarque-Bera probability for all variables is more than 0.05, it means that all variables are normally distributed. The regression will be done with data from the data described in the table.

B. Research variable overview

1. Return On Asset (ROA)

Profitability is the ratio used to see the company's ability to generate profit. Every company will strive to improve the company's performance in order to increase the productivity and profit of the company. The bank's financial performance is a measure that describes the financial condition of a bank. For customers, before depositing funds in a bank they will first see the financial performance of the bank through the financial statements through the balance sheet and profit and loss. One of the indicators used to see the financial performance of profitability is Return On Assets (ROA).

ROA is used to measure bank profitability. Bank Indonesia as the supervisor and supervisor of banking prioritizes the level of profitability measured by assets, where the funds are mostly from the public savings funds (Dendawijaya, 2009). ROA (Return On Asset) is a ratio that is used to measure the ability of bank management in obtaining profit (profit before tax) resulting from the average total assets of the bank. The large amount of ROA, the greater the profit level achieved by banks, so the possibility of banks in troubled conditions is getting smaller.



Source: Data processed, Islamic Banking Statistics monthly report.

FIGURE 4.1

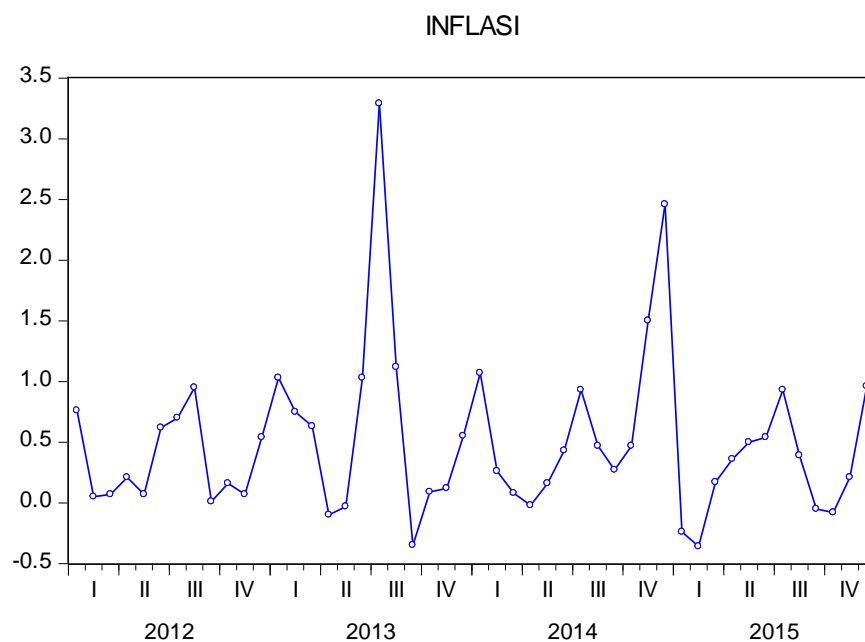
Return on Assets (in percent)

According to the statistical data of sharia banking of Bank Indonesia, in knowing 2011 ROA of sharia banks increased from the previous year, which was 1.7% to 1.8%. And in know 2012 ROA sharia banks again increased from 1.8% to 2.1%. While in the year 2013 sharia bank ROA tends to decline from the previous year. And In 2015, the table shows a decrease of 0.30%, Return on Assets (ROA) at the end of 2015 was recorded at 0.49%. It can be concluded that Return on Assets (ROA) fluctuated from 2011 to 2015.

2. Inflation Rate

Inflation is a condition that indicates the weakening of purchasing power which is followed by the declining value of the currency of a country (Khalwaty 2005: 5). Meanwhile, according to Sukukno (2004:

14), inflation can be defined as a price-increase process that applies in an economy. The movement of inflation each year will be shown below:



Source: Data processed, Badan Pusat Statistik (BPS) monthly report.

FIGURE 4.2

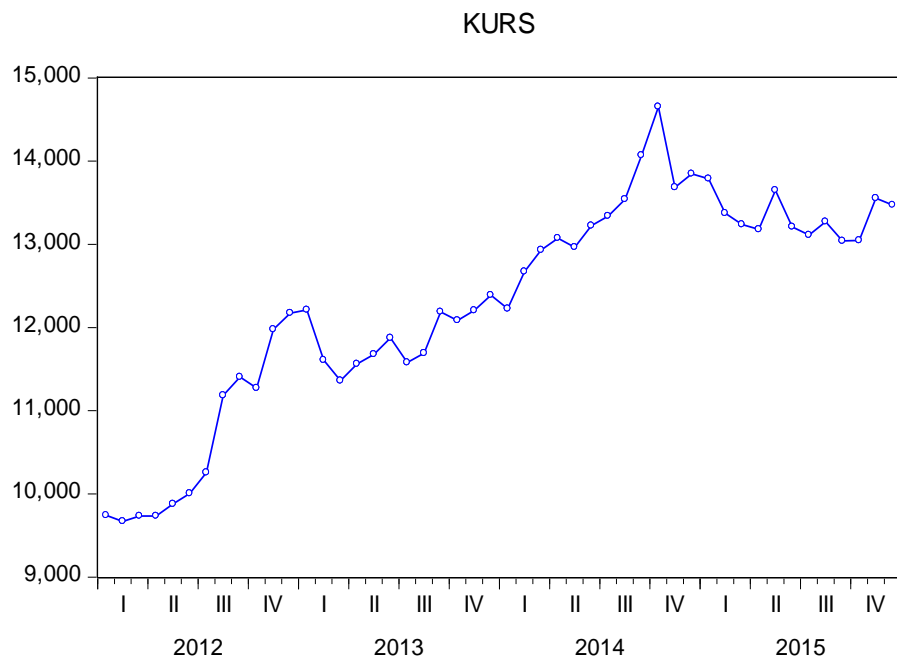
Inflation Rate (in percent)

Based on Inflation rate figure shows that inflation in Indonesia is still fluctuation, seen at the beginning of 2012 the inflation figure reaches 0.76%, whereas in early 2013 inflation rose to 1.03%. In 2015, the inflation at the end of 2015 recorded at 0.96%. It can be concluded that inflation from 2011-2015 fluctuation occurs.

3. Exchange Rate

The value of a foreign currency or exchange rate is a value indicating the amount of domestic currency required to obtain a unit of foreign currency. The exchange rate will determine the return on real

investment. A declining currency will clearly reduce the purchasing power of the income and capital gains derived from any type of investment. The movement of the exchange rate of each year will be shown below:



Source: Data processed, Bank Indonesia monthly report.

FIGURE 4.3

Exchange Rate (In thousand)

According to the figure, the Exchange rate at the beginning of 2012 is 9,744. And beginning in 2013, the exchange rate increased by 2,246, reaching 12,210. Likewise, conversely, the exchange rate from year to year increased, This is evident from the beginning of 2014 exchange rate of 13,074. At the end of 2015, the table shows an increase of 399, the exchange rate at the end of 2015 was recorded at 13.473. It can be concluded that the exchange rate of the 2011-2015 fluctuations occurred.

4. Gross Domestic Product

Gross Domestic Product (GDP) is the most common factor used in measuring macroeconomic performance. Gross Domestic Product (GDP) is the total market value of final goods and services produced in an economy over a period of time (usually one year).

The economic development of a country that is driven by economic growth shows the growth of production of goods and services in an economic area within a certain time interval. The production is measured in the concept of added value created by economic sectors in the region concerned which is totally known as the Gross Domestic Product. Therefore, economic growth is the same as GDP growth. Thus, GDP can be used as an indicator to measure the economic performance of a country as a reflection of the success of a government in moving the economic sectors.

Gross Domestic Product is presented in two price constants, ie, current price and constant price. GDP at current prices often referred to as nominal GDP is the value of goods and services produced by a country in a period of time according to the prevailing price at that time. While GDP over constant prices is often called real GDP is GDP at constant prices where the price factor has been eliminated. Therefore the rate of economic growth can be calculated from GDP over constant prices.

C. Classical Assumption Test

This test is intended to detect the presence or absence of autocorrelation, heteroskedasticity, and multicollinearity in the estimation, because if there is a deviation of the classical assumption then the estimation of the equation model is done to be invalid and disrupt the conclusion of the analysis.

1. Heteroskedasticity Test.

Heteroskedasticity is a detection to see if the interference variable is not constant. The heteroskedasticity test aims to test whether in the regression model there is a variance inequality of the residual one observation to another fixed observation,, it is called homoskedasticity and if the variant is not constant or changing it is called heteroskedasticity. A good regression model is a homoskedasticity or there is no heteroskedasticity (Gujarati, 2007).

The way to find out whether or not the symptoms of heteroskedasticity in this study to test with *Harvey* test If the probability $Obs * R\text{-squared} > 0.05$ then the model there is no heteroskedasticity, and if the probability $Obs * R\text{-squared} < 0.05$ then the model is confirmed there is heteroskedasticity.

TABLE 4.2
Heteroskedasticity Test Result

Heteroskedasticity Test: Harvey

F-statistic	0.852104	Prob. F(3,44)	0.4730
Obs*R-squared	2.635581	Prob. Chi-Square(3)	0.4513
Scaled explained SS	2.871639	Prob. Chi-Square(3)	0.4118

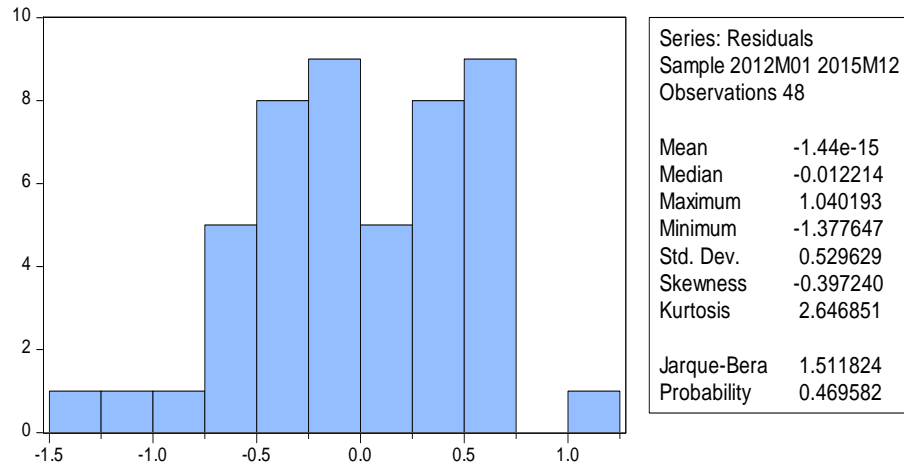
Source: Secondary Data Processed

From table 4.2 above shows heteroskedasticity test by using *Harvey Test*. we can see that the probability value of Obs * R-squared is 0.4513 or greater than 0.05. Then it can be concluded that data in this research variable there is no heteroskedasticity.

2. Normality Test.

This test is to know whether the variables used in the study are either distributed or not. The normality test referred to in the classical assumption of the OLS approach is the residual (data) formed by a normally distributed regression model. To test the assumption of test normality by *Jarque Berra*. If the *Jarque Berra* probability test is greater than 0.05, then the data is good and distributed normally, but if it is less than 0.05 then the data is not good and not normally distributed.

TABLE 4.3
Normality Test Result



Source: Secondary Data Processed

Based on the results of the normality table above shows that the probability value is $0.469582 > 0.05$ so it can be said that the probability value of this model is not significant, while based on normality test results can be seen from the probability value jarguebera (JB), if the probability > 0.05 , then the model in normal state, based on this parameter is known that the value of probability value at JB is 0.469582 greater than the value of 0.05 Thus It can be concluded that the regression model meets the assumption of normality.

3. Multicollinearity Test.

Multicollinearity test aims to determine whether there is a relationship between independent variables. The multicollinearity test aims to test whether the regression model finds a correlation between the independent variables. The multicollinearity test is used to detect the presence or absence of relationships between some or all of the

independent variables in the regression model. Multicollinearity is a state in which one or more independent variables are expressed as linear conditions with other variables.

A good regression model should not be a correlation between independent variables. The results of this test can be seen from the Variance Inflation Factor (VIF) with the VIF equation = $1 / \text{tolerance}$. If VIF is less than 10 then there is no multicollinearity.

TABLE 4.4
Multicollinearity Test Result
Variance Inflation Factors

Variable	Coefficient	Uncentered	Centered
	Variance	VIF	VIF
EXCHANGE RATE	4.41E-09	107.6535	1.175315
INFLATION	0.015192	1.639729	1.043925
GDP	4.84E-32	66.08175	1.222891

Source: Secondary Data Processed

Based on table 4.4 above we can see the results of multicollinearity test in Centered VIF table column. VIF values for Exchange Rate, Inflation and Gross domestic product variables are 1.175315, 1.043925, and 1.222891 means that the Centered VIF value of the three variables is no greater than 10. Then it can be it is said that there is no Multicollinearity in the independent variable.

Based on the classical assumption of linear regression with OLS, a good linear regression model is free from multicollinearity. Thus the above model has been free from the existence of Multikolinearitas.

4. Autocorrelation Test

The autocorrelation test aims to test whether in a linear regression model there is a correlation between the confounding error in period t with an error in period $t-1$ (previous). The correlation test aims to determine whether there is a correlation between the members of a series of observed data by time series or cross-section.

Autocorrelation is a situation where there is a correlation between residual of this year with an error rate of the previous year. To determine the presence or absence of autocorrelation in the model, it can be seen from the statistical value Durbin-Watson

TABLE 4.5
Autocorrelation Test Result

Variable	Coefficient	t-Statistic	Prob
AR(1)	0.884490	7.736300	0,0000
SIGMASQ	0.106698	6.598689	0,0000
Durbin-Watson stat			1.934746

Source : Secondary Data Processed

Based on the above table, the authors perform healing of interference by using AR test (1) on the data. And the table above shows the correlation test results that have been improved by using the AR model (1) there is a DW value is 1.934746 . From this model, it is known that $k=3$; $n=48$. Then we can determine the value of d_U and d_L from Durbin-Watson table which is known that the value of d_U is 1.62 and d_L 1.45, and $4-d_U$ is 2.38, since the value of Durbin-Watson

statistic is between dU and $4-dU$, then in this data is free of autocorrelation problems or in other words there is no autocorrelation from the data.

D. The Result of Regression Estimation

TABLE 4.6
The Result of Regression Estimation

Variables	Regression		
	Coefficient	T-Test	Prob
Constanta	4.822.034	3.939.483	0.0003
Kurs	-0.000332	-4.999.152	0.0000
Inflation	0.054156	0.439384	0.6625
GDP	0.000214	0.972719	0.3360
R-Squared	0.441813		
F-Statistic	11.60886		
Prob F-stat	0.00001		

Dependent Variable : ROA

Source : Secondary Data Processed.

This research using multiple linear regression analysis. The model of this research is :

$$Y_t = \alpha + \beta_1 X_{1t} + \beta_2 X_{2t} + \beta_3 X_{3t} + \beta_4 X_{4t} + e$$

Where :

$Y_t = \text{ROA}$

$\alpha = \text{Constanta}$

$X_{1t} = \text{Kurs}$

$X_{2t} = \text{Inflation}$

$X_{3t} = \text{GDP}$

$e = \text{Error Term}$

$$Y_t = 4.822.034 - 0.000332X_{1t} + 0.054156X_{2t} + 0.000214X_{3t} + e$$

Based on the estimation of regression , the dependent variables in this study is Return On Asset (ROA), and the independent variables are Inflation, Exchange

Rate, and Gross domestic product. Based on the table 4.6 It can be seen that Exchange rate (Kurs) significantly affecting the Return On Asset (ROA) in Islamic Banks in 2012-2015. While Inflation rate and Gross domestic product are not significantly affecting the Return On Asset (ROA) in Islamic Banks in 2012-2015.

1. F-test

F-test is used to determine the effect of independent variables on the dependent variable simultaneously together. According to Ghazali, (2013) the F test essentially aims to show whether all independent or independent variables included in the model have a reciprocal effect on the dependent or dependent variable. Test F is done by using significance value of Test F in this research is done using Eviews-7. Here is a table of F-test values.

TABLE 4.7
f-Test : Kurs, Inflation, GDP to Roa

F-Statistic	11.60886
Prob F-stat	0.00001

Dependent Variable : ROA

Source : Secondary Data Processed

The explanation of the f-test results in table 4.7 above, where the results of the F test in this study has a result of 11.60886 with (Prob F-stat) of 0.00001 results can explain that Prob F-stat smaller than the level of significance 0.05, so it can be concluded that the estimated regression model is feasible to be used to explain the effect of the independent

variable (Inflation, Exchange Rate, and Gross domestic product) on the dependent variable Return On Assets (ROA).

2. t-Test

The t-Test in multiple linear regression is intended to test whether the parameters (regression coefficients and constants) suspected to estimate the equations / multiple linear regression models are appropriate parameters or not, the parameters are able to express the behavior of independent variables in influencing the dependent variable. t-Test in this research use Eviews-7 program. The result of multiple linear regression outputs in table 4.4 above is as follows

TABLE 4.8
t-Test : Kurs, Inflation, GDP to Roa

Variables	Regression		
	Coefficient	T-Test	Prob
Constanta	4.822.034	3.939.483	0.0003
Kurs	-0.000332	-4.999.152	0.0000
Inflation	0.054156	0.439384	0.6625
GDP	0.000214	0.972719	0.3360

Dependent Variable : ROA

Source : Secondary Data Processed

a. Constanta

Based on the result of regression in table 4.8, the constant value is 4.822.034. That is, if all independent variables are Exchange rate, Inflation rate, Gross domestic product are considered to be constant, then the amount of ROA is 4.822.034 .

b. Exchange rate (Kurs)

Variable Exchange rate shows t-statistic of -4.999.152 with probability coefficient of 0.0000 then the meaning of the variable Exchange rate has a negative and significant effect on ROA because the probability value is less than 0.05.

c. Inflation Rtae

Inflation variable shows t-statistic of 0.439384 with probability coefficient of 0.6625 then the meaning of Inflation variable has the positive and not significant effect on ROA because of probability value greater than 0,05.

d. Gross domestic product

Gross domestic product variable shows t-statistic value 0.972719 with the robability coefficient of 0.3360 hence the meaning of variable Gross domestic product have the positive and not significant effect to ROA, because of probability value greater than 0,05.

3. Determination Coefficient Test (R^2)

Determination Coefficient Test R^2 is used to measure how much variation of the dependent variable can be explained by the independent variable. The value of the coefficient of determination can be measured by the value of R-Square or Adjusted R-Square. When the coefficient of determination value = 0 ($\text{Adjusted } R^2 = 0$), the variation of the related variables cannot be explained by the independent variable. While if $R^2 = 1$,

then the variation of the dependent variable as a whole can be explained by the independent variable.

Determination Coefficient (R^2) essentially measures how far the model's ability to explain variations of dependent variables. The coefficient of determination is between zero and one. The small value of R^2 means that the ability of the dependent variables is very limited. A value close to one means the dependent variables provide almost all the information needed to predict the variation of the dependent variable (Ghazali, 2013: 97)

Based on the results of regression in table 4.7 above can be seen that the value of determination coefficient test for the regression model between the Exchange rate, Inflation, Gross domestic product of ROA of 0.441813 or amounted to 44.18% ROA influenced by variable Exchange rate, Inflation and GDP. While 55.82% ROA explained by variable outside research variable ($100\% - 44.18\% = 55,82\%$).

E. Result Discussion

Based on the findings of this study aims to determine some correlation between variables, namely Inflation rate, Exchange rate, Gross domestic product and Return on Assets (ROA). So, here is a further discussion of the findings of this research and hopefully can be the next research material. All 3 (three) independent variables that affect the ROA will be discussed into one by one.

TABLE 4.9
The Accumulation of Independent Variable influence on
Dependent Variables

Variables	Coefficient	Probability
Constanta	4.822.034	0.0003
Kurs	-0.000332	0.0000
Inflation	0.054156	0.6625
GDP	0.000214	0.3360

1. The Influence of Exchange rate (kurs) on Return on Assets (ROA).

Test results show that the Exchange rate (kurs) has a negative direction and has a significant effect on sharia banking ROA because it has a probability of 0.0000 which means it is below α of 0.05. The regression coefficient value of Exchange rate of -0.000332 which means that if there is an increase 1 rupiah then the profitability of sharia bank ROA will decrease around -0.000332 percent. Therefore, the regression results are in accordance with the hypotheses in this study.

From the test results means there is a negative and significant influence on exchange rate variables to profitability of sharia banks in Indonesia period 2012-2015. This result is in accordance with research conducted by Desi Marilyn and Rohmawati (2012) stating that the exchange rate will determine the return on real investment. A declining currency will clearly reduce the purchasing power of the income and capital gains derived from any type of investment. This decrease in investment will affect the bank's operational activities. With the decline in

investment, demand for financing in Islamic banks will also decline. And for the next will affect the financial ratios of banks, one of which profitability ratios are represented by ROA (Sukirno, 2006: 38).

This study is supported by other research conducted by several researchers, among others: Dwijayanthi and Naomi (2009) state that any impact of exchange rate on profitability, where the bank identifies if exchange rate appreciation or depreciation, it will impact on the obligations abroad. bank currency at maturity. As a result, bank profitability will change if in such case, the bank does not hedge. This result is also supported by Samuelson's (2006) argument. The exchange rate is important because during the economic crisis there is generally an increase in the dollar, thus causing foreign debt to be unable to pay, so the bank will have difficulty in making payments.

2. The Influence of Inflation rate on Return on Assets (ROA).

Test results show that Inflation has a positive direction and does not have a significant effect on sharia banking ROA because it has a probability of 0.6625 which means is above α of 0.05. The value of the inflation coefficient is 0.054156 which means that if there is an increase of 1% inflation, Return on Assets (ROA) will rise about 0.054156%, assuming other variables are constant. Therefore, the regression results are not in accordance with the hypothesis in this study. The results of this study in accordance with research conducted by some researchers, among others:

Suryanto and Kesuma (2012), inflation does not affect the Return on Assets. The high rate of inflation will lower the Return on Assets, while low inflation will cause economic growth to slow. This indicates that although inflation has increased, corporate profits have not decreased significantly and vice versa. If inflation rises, corporate earnings do not experience a significant decline and vice versa.

The results of this test show that inflation does not significantly affect the profitability of sharia banks in Indonesia period 2012-2015 because the value of significance is greater than the value of alpha, which is 0.05. This result is in accordance with research conducted by Anto and Wibowo (2012) stating that the inflation rate that occurred in Indonesia has no effect in increasing or decreasing the profitability of sharia banks. This is also supported by Rosanna (2007) who said that at the time of high inflation, the public believes more in sharia banks in comparison with conventional banking. The belief of the community is also due to historical experience during the economic crisis of 1997, during which time the inflation rate in Indonesia was very high and ultimately resulted in many conventional banks that went bankrupt due to applying the high rate of interest to offset the rate of inflation and to withdraw customers to keep placing their funds so as to result in a negative spread and in the end the bank can not refund the public funds that have been saved and the interest.

3. The Influence of GDP on Return on Assets (ROA)

The test results show that the Gross domestic product has a positive direction and not significant effect on sharia banking ROA because it has a probability of 0.3360 which means it is above α of 0.05. The regression coefficient value GDP of 0.000214 which means that if there is an increase of GDP of 1 percent then the profitability of sharia bank ROA will increase by 0.000214 percent. Therefore, the regression results are not in accordance with the hypotheses in this study.

GDP measures the value of goods and services produced in a country's territory without distinction of citizenship in any given year. So that higher GDP growth rates will indicate the high growth rate of consumption of citizens in the country, which will affect the increase in consumption demand levels such as companies (Sudarsana, 2007)

Basically, GDP will increase the level of consumption and investment that will improve the performance of the company. However, due to the influence of this increase in GDP only affect the consumption of the company's products directly.

Increased demand will increase the number of corporate profits from an increase in the number of sales, which will also impact on increasing the company's stock price. The results of this study in accordance with research conducted by some researchers, among others: Perdana (2014) which states that the results achieved in this study indicate that inflation has no effect on the company's ROA, interest rates have a

negative effect on corporate ROA, and GDP has no influence on the company's ROA.