

# The Influence of Bi Rate and Inflation on *Mudharabah* Deposits at Jabar Banten Islamic Bank

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**Abstract:** This research was conducted to analyze the influence of BI rate and inflation on *mudharabah* deposits in Jabar Banten Islamic Bank. The data used in this study are monthly data from January 2015 to December 2017. The analysis technique used is multiple linear regression and hypothesis testing using t-statistics to test the partial regression coefficient with a level of significance of 5%. Besides that, a classic assumption test is also conducted which included normality test, heteroscedasticity test, autocorrelation test and multicollinearity test. During the observation period, from January 2015 to December 2017, the results of the study do not find any classical assumptions deviations. This indicates that the available data met the requirements for the use of multiple regression equation models. The results show that BI rate has a significant negative effect on *mudharabah* deposits, with a level of significance smaller than 5%. Inflation has a positive and insignificant effect on *mudharabah* deposits, with a level of significance greater than 5%.

**Keywords:** Bank, Rate, Inflation, *Mudharabah*, Deposits.

## I. INTRODUCTION

The Islamic economic system in Indonesia has been developed with the emergence of Islamic financial institutions. The development of financial institutions in Indonesia has now become a benchmark for the success of Islamic economics. Islamic banking is one of the financial institutions that have a big influence on the economy of the community. Islamic banks have different operational system from conventional ones. Islamic banks provide interest-free services to their customers, but provide profit sharing and other benefits in accordance with the approved contract (Ichsan: 2014).

In Islamic banking, There are various types of transactions that have been arranged which do not harm both parties. Third party funds are one of the fund contribution in Islamic banks that come from the community, both individuals and business entities. The type of third party funds collected by Islamic banks consist of demand deposits, savings and term deposits. The principle of *sharia* operations applied in collecting public funds uses *wadiah* and *mudharabah* contracts (Muljono: 2015).

*Mudharabah* is usually applied to financial and fund products. On the side of the fund collector there are two kinds of *mudharbah*, namely term savings or ordinary deposits and special deposits (special investment) that are purposed for certain businesses. On the financing side, there is financing for working capital and special investment. *Mudharabah*

deposits use the principle of *mudharabah*, namely in the form of contracts or agreements in the form of deposits between depositors (*Shahibul Maal*) and the bank (*mudharib*) to obtain income or profits. The income is divided based on the approved ratio at the beginning of the contract. *Mudharabah* deposits are classified into 1 month, 3 months, 6 months and 12 months deposits. The provision of profit-sharing benefits to the owner of the deposit fund is carried out every date of the bookkeeping of *mudharabah* deposits or carried out at the end of each month (Arthesa: 2011).

BI rate is a policy interest rate that reflects the monetary policy stance set by Bank of Indonesia and is publicly announced. Taking into account other factors in the economy, Indonesian banks will generally raise BI rate if upcoming inflation is expected to exceed the set targets, whereas Bank of Indonesia will lower BI rate if upcoming inflation is expected to be below the set target. Inflation has a very bad effect on the economy because it can weaken the spirit of saving and attitudes toward saving from the community and cause disruption to the function of money, especially to the savings function (save value), functions of advance distribution, and functions of unit calculations (Karim: 2008).

Rudiansyah (2014) in a study entitled "The Influence of Inflation, Bi Rate, GDP and Rupiah Exchange Rate on *Mudharabah* Deposits in Islamic Banks in Indonesia" states that the inflation variable, BI rate, GDP and Rupiah exchange rate simultaneously have a significant influence on *mudharabah* savings in Islamic ban in Indonesia. This indicates that macroeconomic variables can affect *mudharabah* savings in Islamic banks in Indonesia.

Rahayu and Seregar (2018) in a study entitled "The Influence of *Mudharabah* Deposits, Bank of Indonesia Futures Rates and Inflation on *Mudharabah* Deposits of PT Bank Negara Indonesia Sharia say that the variable level of profit sharing of *mudharabah* deposits, the interest rate of Bank of Indonesia for 1 month and inflation had a significant effect on the number of *mudharabah* deposits.

Iskandar and Firdaus (2018) in a study entitled "The Influence of Interest Rates, Inflation and Exchange Rate of Rupiah on *Mudharabah* Deposits and Conventional Bank Deposits on Banking in Indonesia" state that of the three variables, namely interest rates, inflation and the rupiah exchange rate, the rupiah exchange rate is not effect on conventional deposits, but for *mudharabah* deposits, all variable rates of interest,

inflation and the rupiah exchange rate affect *mudharabah* deposits.

Syukriah Ali, et, al (2012) in a study entitled “Macroeconomics Variables and Its Impact to Mudharabah Investment Deposits in Malaysia “, states that the Rate of Return (ROR) shows that there is significant strong positive relationship with *Mudharabah* Investment Deposit in Malaysia. It is proved by using three difference regression models. Only one predictor namely Rate of Return (ROR) had significant influence with *Mudharabah* Investment Deposits while Gross Domestic Product (GDP) and Inflation Rate (INF) had no significant influence with *Mudharabah* Investment Deposits.

## II. LITERATURE REVIEW

BI rate is a policy interest rate that reflects the monetary policy stance set by Bank Indonesia and is publicly announced. Bank of Indonesia will raise BI rate if upcoming inflation is expected to exceed the predetermined target, whereas Bank of Indonesia will reduce BI rate if upcoming inflation is expected to be below the set target. Interest can be interpreted as the price that must be paid to customers (who have savings) with what must be paid by the customer to the bank (the customer who gets the loan) (Kasmir: 2014). BI rate is announced by the Bank of Indonesia Board of Governors at each monthly Board of Governors Meeting. It is implemented in monetary operations conducted by Bank of Indonesia through liquidity management in the money market to achieve the operational objectives of monetary policy.

Inflation is an economic condition experiencing instability due to the increase of high prices and continuously causes adverse effects to society. Inflation is defined as a price increase in general and continuously certain period of time. The price increase of just one or two items cannot be called inflation, unless the increase extends (or results in an increase in prices) in other goods. The opposite of inflation is called deflation. Inflation is contrary to the usury-free economy because it harms the social justice. Even though, Islam requires justice to the borrower, it does not approve of injustice to lenders. Indeed, inflation causes unfairness on interest-free lenders by decreasing the real value of qaradh al-hasan, namely loans given without interest or inclusion of the share of profits (Sukirno:13).

The zero percent inflation rate is not the main goal of government policy. Its policy is trying to keep the inflation rate low. Inflation rates increase suddenly as a result of a particular event that applies outside of government expectations. For example, the effects of huge depreciation of money (depreciation of money values) or political instability and constantly rising costs that cause productive activities to be very unprofitable. So, capital owners usually prefer to use their money for speculative purposes (Sukirno: 13).

Deposits according to Law No. 21 of 2008 is investment in funds based on *mudharabah* agreements or other contracts

that agree with sharia principles, which can only be withdrawn at certain times based on the contract between sharia bank deposit customers or UUS (Ismail: 2011). Deposits are funds that can be withdrawn in accordance with the agreement based on the approved period of time. Withdrawals of deposits can only be made at certain times. The longer period of time deposits will be the higher the percentage of profit sharing ratio provided by Islamic banks. Bank deposits are money deposited in banks by individuals and certain business institutions to be stored and then withdrawn when needed, or based on mutually agreed terms (Abdullah: 2008).

*Mudharabah* comes from the word *al-dharb fi al-ardh* which means to travel for business. Called qiradh which comes from the word *al-qaradh* which means discount, because the owner deducts part of his property to be traded and gets a portion of the profit (Nurhayati: 2015). *Mudharabah* is a contract of business cooperation between two parties, namely the owner of the fund as the first party to provide all funds, and the fund manager as the second party acting as manager and business profits divided according to the agreement of all parties while if financial losses are borne by the fund manager (Suwiknyo: 2009).

*Mudharabah* is to give capital money to people who are trading so that they get a profit percentage. In terms of *fiqh muamalah*, *Mudharabah* is a form of commerce in which the owners of capital (*Shahibul Maal*) deposit their capital to entrepreneurs (*mudharib*), to demonstrate that the profits will be shared in accordance with the agreement of both parties while losses will be borne by the capital owner (Yunaldi: 2007).

*Mudharabah* deposits are customer funds that are deposited in a bank where the withdrawal is based on a predetermined period of time, with profit sharing in accordance with agreed *nisbah* or percentage. *Mudharabah* deposits use the principle of *mudharabah*, namely in the form of contracts or agreements in the form of deposits between depositors (*Shahibul Maal*) and the bank (*Mudharib*) to obtain income or profits. The income is divided based on the agreed ratio at the beginning of the contract. (Ansori: 2018).

## III. METHODOLOGY

### *Data Source*

A study requires data that will help researchers to arrive at a certain conclusion, while the data will reinforce formulated conclusion. The data used in this study is secondary data. The data used in this study is BI rate, inflation and financial statements of PT Bank BJB Syariah Tbk per month from 2015 to 2017.

### *Data Analysis Method*

This study looks for the influence of BI rate and inflation on *mudharabah* deposits in BJB Syariah, so the analysis used is multiple regression with the following formula:

$$Y = \alpha + \beta X_1 + \beta X_2 + e$$

Dimana :

Y = Mudharabah Deposits

$\alpha$  = constant

X1 = BI rate

X2 = Inflation

$\beta$  = Independent Variable Regression Coefficient

e = Standard error

The analysis technique used is multiple regression with the least squares equation and hypothesis testing using t-statistics to test the partial regression coefficients and f-statistics to test the significance of the effect together with the level of significance of 5% (Ghozali: 2013). Besides that, a classic assumption test was also conducted which included normality test, multicollinearity test, heteroscedasticity test and autocorrelation test.

#### IV. RESULTS AND DISCUSSION

##### Descriptive Statistics

The data used in this study is PT Bank Jabar Banten Syariah Tbk with the year of research, namely January to December of 2015-2017. The research data is taken from published financial reports of PT Bank Jabar Banten Syariah Tbk, BI rate and inflation

Table 1. Calculation of Minimum Value, Maximum, Mean and Standard Deviation

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
BI Rate	36	4,25	7,75	6,0278	1,35459
Inflasi	36	2,79	7,26	4,5742	1,49950
Deposito Mudharabah	36	15,10	15,46	15,2841	,10257
Valid N (listwise)	36				

Source: secondary data processed

Based on the results of calculations in Table 1 that the average BI rate is 6.0278% with a standard deviation (SD) of 1.35459%, the results show that the SD value is smaller than the average BI rate which indicates that the variable BI rate data indicates good result. This is because the standard deviation value that reflects the deviation from the variable data is relatively low because it is smaller than the average value. The lowest BI rate is 4.25% and the highest BI rate is 7.75%.

Inflation variable Based on the results of calculations in Table 1 that the average value of inflation is 4.5742% with a standard deviation (SD) of 1.49950% the results indicate that the value of SD is smaller than the average inflation which

indicates that the inflation variable indicates the results the good one. This is because the standard deviation value that reflects the deviation from the variable data is relatively low because it is smaller than the average value. The lowest inflation value is 2.79% and the highest inflation value is 7.26%.

*Mudharabah* deposit variables Based on the results of calculations in Table 1 that the average value of *mudharabah* deposits is 15.2841 with a standard deviation (SD) of 0.10257 these results indicate that the value of SD is smaller than the average *mudharabah* deposit indicating that the *mudharabah* deposit variable indicates good results. This is because the standard deviation value that reflects the deviation from the variable data is relatively low because it is smaller than the average value. The lowest value of *mudharabah* deposits is 15.10 and the highest value of *mudharabah* deposits is 15.46.

##### Normality Test

This normality test is carried out because the tested data with parametric statistics must be normally distributed. A good regression model is to have normal or near normal data distribution. Normality test can be done using the normality test Kolmogorov Smirnov (Ghozali, 2013). Kolmogorov Smirnov test results can be seen in table 2 below:

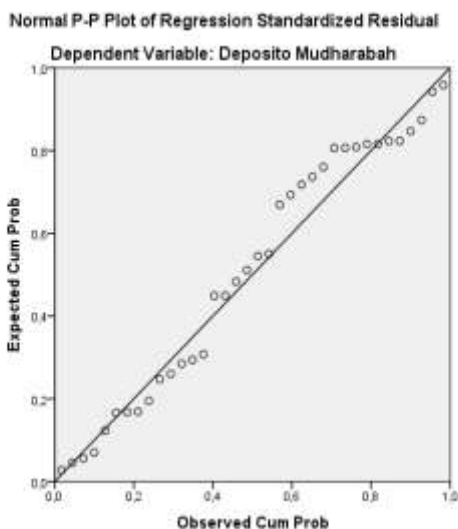
Table 2. Normality Test

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		36
Normal Parameters <sup>a,b</sup>	Mean	,0000000
	Std. Deviation	,08155570
Most Extreme Differences	Absolute	,119
	Positive	,086
	Negative	-,119
Test Statistic		,119
Asymp. Sig. (2-tailed)		,197 <sup>c</sup>
a. Test distribution is Normal.		
b. Calculated from data.		

Source: secondary data processed

The test results on normality using the Kolmogorov Smirnov test showed that the residual statistic has a significance value above 0.05, which is 0.197, this means that the data is normally distributed.

Another detection by looking at the spread of points on the diagonal axis of the graph through the normal P-P plot. Based on the normal P-P chart the plot shows the points on the graph still spreading around the diagonal line, and its spread follows the direction of the diagonal line. These results indicate that the research data is normally distributed. The P-P Plot graph can be seen in Figure 1 below:



Source: secondary data processed

Figure 1. Normality Test with P-P Graph Plot

**Autocorrelation Test**

The autocorrelation test aims to test whether in a linear regression model there is a correlation between confounding errors in period t with period t-1 errors, which means that the current condition is affected by previous conditions. A good regression model is free from autocorrelation. To determine whether there is autocorrelation or not, it can be seen from the run test as follows:

Table 3. Autocorrelation Test

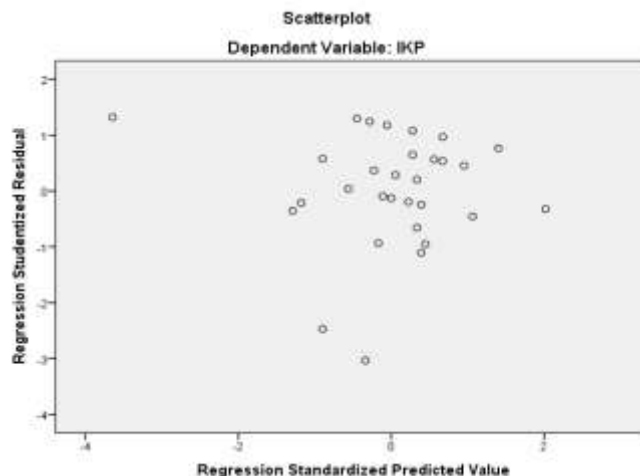
Runs Test	
	Unstandardized Residual
Test Value <sup>a</sup>	,00586
Cases < Test Value	18
Cases >= Test Value	18
Total Cases	36
Number of Runs	13
Z	-1,860
Asymp. Sig. (2-tailed)	,063
a. Median	

Source: secondary data processed

Based on the results of testing the autocorrelation table 3 above shows that the value of the run test is Asymp. Sig. (2-tailed) 0.063 > 0.05, there was no autocorrelation in this study.

**Heteroscedasticity Test**

Heteroscedasticity testing is done using Scatterplot. Scatterplot patterns that do not form lines or wavy indicate the absence of heteroscedasticity problems. The results of testing heteroscedasticity can be seen in Figure 2 as follows:



Source: secondary data processed

Figure 2. Heteroscedasticity Test

Based on figure 2 Scatterplot shows that the points spread randomly and spread both above and below the number 0 on the Y axis. Thus it can be concluded that there is no problem of heteroscedasticity in the regression model.

**Multicollinearity Test**

Multicollinearity test aims to test whether in the regression formed there is a high or perfect correlation between independent variables or not. The best regression model should not have a correlation between the independent variables. To detect the presence or absence of multicollinearity. In the regression model can be seen from the toller value and variance inflation factor (VIF). If VIF <10 and tolerance value > 0.10 then there are no symptoms of multicollinearity.

Table 4. Multicollinearity Test

Coefficients <sup>a</sup>			
Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	BI Rate	,490	2,040
	Inflasi	,490	2,040

Source: secondary data processed

Based on the results in Table 4 it can be explained that the VIF value (variance inflation factor) is below 10 and the tolerance value is above 0.1. So it can be concluded that the regression model is free from multicollinearity problems.

**Determination Coefficient Test (R<sup>2</sup>)**

The coefficient of determination shows the percentage of the dependent variable that can be explained by independent variables. The value of the coefficient of determination can be obtained from the value of R<sup>2</sup>. Based on the results of the SPSS output the value of R<sup>2</sup> can be seen in Table 5 as follows:



Table 5. Determination Coefficient Test

Model Summary <sup>b</sup>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,606 <sup>a</sup>	,368	,329	,08399
a. Predictors: (Constant), Inflasi, BI Rate				
b. Dependent Variable: Deposito Mudharabah				

Source: secondary data processed

Viewed from Table 5 above, the coefficient of determination (R<sup>2</sup>) is 0.368 or 36.8%. This explains that the ability to explain the independent variable is BI rate and inflation on the dependent variable that is *mudharabah* deposits which can be explained by the equation model of 36.8% while the difference of 63.2% is effected by other factors not included in the regression model.

#### Statistics F Test

The F test is used to determine whether simultaneous BI margin and inflation variables have a significant or no influence on *mudharabah* deposits. To find out it is done by the F test by comparing the value of F count with F<sub>table</sub> and seeing the significance level of the level.

TABLE 6. Regression Calculation ANOVA <sup>a</sup>						
Model	Sum of Squares	Df	Mean Square	F	Sig.	
1	Regression	,135	2	,068	9,599	,001 <sup>b</sup>
	Residual	,233	33	,007		
	Total	,368	35			
a. Dependent Variable: Deposito Mudharabah						
b. Predictors: (Constant), Inflasi, BI Rate						

Source: secondary data processed

Based on table 6 above, the results of the F test can be seen from the value of F<sub>count</sub> in the ANOVA table which is obtained by F<sub>calculation</sub> 9.599 with a significance level of 0.001. The level of significance is smaller than 0.05 and F<sub>count</sub> > F<sub>table</sub> (9.599 > 3.28), then the model is feasible (goodness of fit).

#### Statistics t Test

The t test is used to test whether the BI variable margin and inflation partially have a significant or no influence on *mudharabah* deposits. The results of the significance test or t test can be seen as follows:

Table 7. Multiple Regression Calculation

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	15,552	,065		240,150	,000
	BI Rate	-,058	,015	-,762	-3,856	,001
	Inflasi	,018	,014	,257	1,297	,203

Source: secondary data processed

Based on table 7 above, the regression equation model is obtained as follows:

$$Y = 15,552 - 0,058 X_1 + 0,018 X_2$$

From the simple linear regression equation above, it can be analyzed as follows:

- 1) From the calculation of the variable BI rate, the value of t count is -3.856 and a significant value of 0.001 < 0.05, then there is a significant negative effect between BI rate on *mudharabah* deposits.
- 2) From the calculation of the variable inflation, the value of t arithmetic is 1.297 and a significant value of 0.203 > 0.05, then there is no significant positive effect between inflation on *mudharabah* deposits.

#### V. CONCLUSION

Based on the results of data analysis and discussion that has been described, it can be concluded that the data used in this study are normally distributed, there is no multicollinearity, free of autocorrelation and heteroscedasticity.

Based on the test the coefficient of determination (R<sup>2</sup>) is 0.368 or 36.8%. This explains that the influence of BI rate and inflation is 36.8%. While the remaining 63.2% is influenced by other variables, the results of the t test on BI rate, the value of t count is -3.856 and the significant value is 0.001 < 0.05, then there is a significant negative effect between BI rate on *mudharabah* deposits and the t test on variable inflation, the value of t arithmetic is 1.297 and a significant value of 0.203 > 0.05, then there is a not significant positive effect between inflation on *mudharabah* deposits.

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