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Macro Economy Effect On Islamic Banking Profitability In Indonesia

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Abstract

This research is interesting to know the effect of macroeconomic conditions (BI Rate, Exchange Rate and inflation) on the profitability of Indonesian Islamic banking. The population in this study is the financial statements of Indonesian Islamic banking, the sample is the data in 2014-2018. The sampling technique using purposive sampling. This research resulted that indicate inflation does not affect the profitability of Indonesian Islamic banking. While an exchange rate has a positive significant effect on Islamic banking. While the BI Rate has negative significant effect on profitability.

K**eywords:** *Macro Economy, Inflation, BI rate, Exchange Rate, Profitability*

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1. INTRODUCTION

Islamic banking asset growth is higher than in conventional banking. This proves that Islamic banking can maintain its existence in facing the economic situation, despite the challenges in terms of human resources (HR), products, networks, and capital. This has not been good news for the development of Islamic banking. Because, although sharia banking has experienced faster asset growth than conventional banking, total sharia banking assets still lag behind conventional banking, as shown in the following figure:

Figure 1. Sharia Banking Market Share
Source: OJK, (2018)

Based on 2018 Islamic banking outlays, total Islamic banking assets are only 5.70% of conventional banking. The proportion of sharia banking assets of 5.70% consists of 66.22% Sharia Commercial Banks, 31.25% Sharia Business Units, and 2.53% Sharia Rural Bank (SRB).

Profitability is important for Islamic banking. Islamic banking is a profit-oriented corporate entity and the halal oriented, high profitability of the company goals. Profitability is said to be one indicator in measuring the performance of a company. The higher profitability means the better the banking performance. Banking profitability has been regulated in Bank Indonesia's Circular Letter No. 06/23/DPNP dated May 31, 2004 (Bank Indonesia, 2004) on Rating System for Commercial Banks and their attachments, stating that there are three ratios in reducing bank profitability. These three ratios are Return on Equity (ROE), Return on Assets (ROA), and Net Interest Margin (NIM). ROA is an indicator to measure the average profit of each IDR of its assets (Siamat, 2005). ROA is a ratio that measures the profitability of banks showing the ratio between profit before tax with total banking assets. This ratio shows the level of efficiency in managing banking assets. The effectiveness of management is usually measured by ROA in banking. ROA is usually ratio generating profits with the number of available assets (Syah, 2018). Interesting in focusing on the profitability of banks there are influencing factors that can be controlled by banking management and there are factors the banks themselves are unable to control. The factors that can be controlled by banking management are related to internal banking management, such as fund collection management, financing management, liquidity management, capital management, and other banking risk management. Whereas factors that are not controlled by banks are usually banking environment factors and banking characteristics such as market structure, inflation, foreign exchange rates, regulations, interest rates, and so on (Syah, 2018)

Meanwhile, according to Nuril Hidayati, (2014) several factors affect bank profitability, both internal and external factors. Internal banking factors include the management of banking fund collection, banking financing management, liquidity management, strategy management, management, and so on. These various factors give a message to banks to maintain sharia banking health ratios. Banking external factors include the macroeconomic situation of a country. Macroeconomic factors include the state of inflation of a country, the exchange rate of the IDR against the US dollar, the interest rate (BI Rate), and so on. The economic situation needs to be continuously monitored by banks to protect the interests of the parties towards Perbanakan especially the depositors and the users of Sharia Perbanakan funds. From the description above, researchers are interested in knowing macroeconomic factors (inflation, BI rate, and exchange rates) impacting the profitability of Islamic banking in Indonesia.

2. THEORY BASIS

2.1. Inflation toward Bank profitability

Inflation reflects a process of rising prices of goods within a certain period. The higher the inflation, the higher the price of an item. Inflation stability is necessary for sustainable economic growth to improve people's welfare. Unstable inflation has an impact on socio-economic conditions in society (Tho'in & Prastiwi, 2019). This can affect the economic cycle because it will affect people's purchasing power. Inflation influences banking performance, According to the research of Umar et al., (2014) Inflation causes people to prefer investing in business projects to avoid losses from the declining purchasing power of the IDR. This means that people prefer to invest their money in business projects rather than saving it in banking. Also, depositors will withdraw funds from banks. This has led to a decline in bank profitability due to a lack of funds from people who save money.

There is some empirical literature on inflation affecting bank profitability. Various kinds of research results on inflation to the profitability of banks, and there are positive or negative correlations. This has many factors that influence, such as the state of a country's economy, the focus of the banking business itself, and so on. Inflation is beneficial so that it increases profitability, or even vice versa can reduce profitability. Research on which inflation has a negative effect on profitability was conducted by Umar et al., (2014); Dwijayanthy & Naomi, (2009) where inflation has a negative impact on reducing banking performance in Indonesia.

While inflation has a positive impact on bank profitability, as shown by research Pebruary & Aziz Widya Irawan, (2017) that inflation has a significant impact on increasing the profitability of Islamic banking. Here inflation affects the profitability of Bank Syariah Mandiri in Indonesia. Research Nuril Hidayati, (2014) inflation has a positive effect on the profitability of Islamic banking in Indonesia. Tan & Floros, (2012) there is an influence of inflation on the profitability of banks in China, China.

H1: The hypothesis here is that inflation has a significant impact on reducing profitability

2.2. BI rate toward Bank Profitability

Another macroeconomic factor here is the interest rate of the Central Bank of Indonesia (BI) or called BI Rate. BI rate is the benchmark interest rate set by the Central Bank of Indonesia (Bank Indonesia, 2016). In 2016, the BI rate is set once every seven days with the name BI seven days (reserve) repo rate. BI rate is an important basis for a country's economy because the BI Rate is the basis for setting interest rates in both conventional banking and Islamic banking.

According to Borio et al., (2015), monetary policies that reduce central bank interest rates can stimulate economic growth. The relationship between the BI rate and the profitability of banks can be both positive and negative. If the Central Bank of Indonesia raises the BI rate, the public tends to keep their money in the bank. Public funds are managed by banks through lending to increase bank profits. This means that the BI rate has a positive correlation with bank profitability. Conversely, if the Indonesian central bank lowers the BI rate, people tend to withdraw their funds from banks. However, the decline in the BI rate was followed by declining lending rates. Low lending rates, and attracting people to borrow money are sacrificed, which causes an increase in profitability. This means that the BI rate has a negative correlation with profitability.

Here the significant negative impact of BI Rate on profitability is shown by the results research of Syah, (2018); (Wilko et al., 2015); Pebruary & Aziz Widya Irawan, (2017); Bi Rate has a significant negative relationship to bank profitability. While the BI rate has a significant positive effect on profitability shown by the results research of Bikker & Vervliet, (2018); Budiyono, (2017). Malik et al., (2014).

H2: The hypothesis in this study is that the BI rate has a significant negative effect on profitability

2.3. Exchange Rate toward Bank Profitability

The next macroeconomic factor is the change in foreign exchange rates. Here what is meant by the exchange rate is the exchange rate of IDR against the US dollar. These changes in exchange rates greatly affect Indonesia's economic activity, for example, the weakening of the IDR against the US dollar. This can be beneficial for those who carry out export activities. On the contrary, it will be very detrimental for those carrying out import activities. Various imported goods or imported raw materials will increase in price and affect the price of goods made from such goods. The weakening of the IDR against the dollar will directly impact economic activities, such as investment, public consumption as well as the banking sector, will also be affected by this event. According to Umar (2014), a fall in the exchange rate will worsen the bank's trading performance, which causes a decrease in bank profitability.

The effect of the IDR exchange rate on the US dollar on bank profitability in a positive direction was carried out by a previous study, research Nuril Hidayati, (2014) which showed that the exchange rate variable had a significant positive effect on the profitability of Islamic banks in Indonesia. He et al., (2014) observed that an increase in the value of the US dollar versus a basket of foreign currencies would increase the income of US-based institutions in the coming quarters. Sodiq, (2014) Interest Rates have a significant positive effect on the profitability of Islamic banks. Dwijayanthy & Naomi, (2009) BI rate has a negative effect on bank profitability.

H3: The hypothesis in this study is that the exchange rate has a significant negative impact on profitability

3. RESEARCH METHODS

This research is quantitative. The variables in this study are inflation, the IDR exchange rate against the US dollar, Bank Indonesia interest rates (BI Rate), and Return on Assets (ROA). This study took the population of the Islamic banking financial statements that have been published by institutions: the Financial Services Authority (OJK), the Central Statistics Agency (BPS), and also Bank Indonesia (BI). The sample in this study is data from 2014-2018. The sampling technique uses purposive sampling. ROA ratio is used to measure the ability of banks to obtain profits (profits) (Dendawijaya, 2009). In this study ROA was presented using a formula following Bank Indonesia Circular Letter Number 13/30 / DPNP dated December 16, 2011(Bank Indonesia, 2004) as follows:

$$\mathrm{ROA} = \frac{\text{Profit before tax}}{\text{total Assets}}$$

Inflation is an increase in overall prices in an economy continuously for a certain period. The Consumer Price Index (CPI) as an indicator of inflation. Inflation can be calculated by the formula:

$$\text{Inflasition (t)} = \frac{\mathrm{CPI\ (t)} - \mathrm{CPI\ (t-1)}}{\mathrm{CPI\ (t-1)}}$$

Information:
Inflation (t): Inflation
CPI (t): Consumer Price Index for the base year
CPI (t-1): index of Consumer Price of the previous year

Exchange rates of currency or exchange rates are the price of another country's currency against domestic currency or vice versa. The exchange rate in this study uses the exchange rate of the IDR against the US dollar. Exchange rates can be calculated by the formula:

$$\text{Middle Rate} = \frac{\text{Selling Rate} + \text{Buy Rate}}{2}$$

According to Liembono, (2014), the BI rate is a policy interest rate that reflects the stance or monetary policy stance set by Bank Indonesia and announced to the public.

This study uses multiple linear regression analysis, with the regression equation model as follows:

$$\mathbf{ROA = \alpha + \beta_1 Inf + \beta_2 ER + \beta_3 BI\_Rate}$$

Description:
Inf : Inflation
ER: IDR exchange rate to US dollar (exchange rate)
BI_Rate : Indonesia's central bank interest rate (BI Rate)
ROA : Return On Asset

4. RESEARCH RESULTS AND DISCUSSION

4.1. Data Analysis Method

4.1.1. Classic Assumption Test Results

a. Normality Test

The results of the normality test with Kolmogorov Smirnov showed the asymp value. Sign (2-tailed) as follows:

Table 1. Normality Test Results

Amount of Data	48
Test Statistic	0,117
Asymp. Sig. (2-tailed)	0,096

Data Source. data, processed (2020)

The normality test with Kolmogorov Smirnov showed the asymp value. Sign (2-tailed) regression equation models of 0.096>0.05 imply that data in this study are normally distributed.

b. Autocorrelation Test

The Durbin Watson test was used in this study as an autocorrelation test. Good data is data that does not occur autocorrelation. It is said that free from autocorrelation when Durbin-Watson is between -2 and +2 or -2 <DW <+2 (Sunyoto, 2013). The autocorrelation test results are shown as follows:

Table 2. Autocorrelation Test Results

Durbin-Watson	Indicator there is no autocorrelation	Description
0,931	-2 < 0,931 < 2	Free from autocorrelation

Data Source. data, processed (2020)

Based on the above results it is concluded that 0.931 is between -2 <0.931 <+2, meaning that there is no autocorrelation.

c. Multicollinearity Test

The results of the multicollinearity test with the Variance Influence Factor (VIF) and Tollerance tests showed the following values:

Table 3. Multicollinearity Test Results

	Tollerance Test Results	VIF Test Results	Description
a. Inf	0,987	1,013	There is no multicollinearity between independent variables
b. Exchange Rate (ER)	0,945	1,059	
c. BI_Rate	0,933	1,072	

Data source. data, processed (2020)

The regression equation shows the same value, namely the Tollerance value of inflation, the exchange rate, and the BI rate respectively 0.987; 0.945; and 0.933 are all greater than 0.1 while VIF values are 1.013, respectively; 1.059, and 1.072 are all smaller than 10. This shows that free multicolinieritas or passing the multicollinearity test.

d. Heteroscedasticity Testing

The heteroscedasticity test uses the Glejser test. Good data is no heteroscedasticity. Data does not occur heteroscedasticity if the significance value (sig) is greater than 0.05. The following Glejser test results:

Table 4. Glejser Test Results

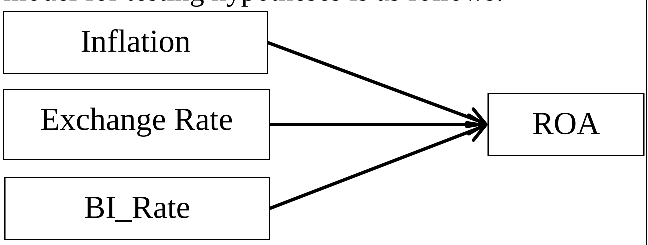
Model	t	Sig.
INF	0.262	0.794
ER	0.569	0.572
BI_RATE	0.031	0.975
Variable's Dependent is Absresid		

Source: data, processed by SPSS (2020)

Based on the results above, the significance value (sig.) Of the inflation, exchange rate, and BI rate variables are 0.794; 0.572; 0.975> 0.05. Then the data does not occur heteroscedasticity.

4.1.2. Hypothesis test results

Hypothesis testing with multiple linear regression models by SPSS version 23. The equation model for testing hypotheses is as follows:



$$\mathbf{ROA = \alpha + \beta_1 Inf + \beta_2 ER + \beta_1 BI\_Rate}$$

Description
Inf: Inflation
ER: Exchange rate (IDR to US dollar)
BI_Rate: Bank Indonesia interest rates (BI Rate)
ROA: Return On Asset

The hypothesis are tested and produces the following:

Table 5. t Test Results

	Betha coefficient	Sign	Description
Contsant	-1,834		
Inf (Inflation)	-21,337	0,089	No significant effect
Exchange Rate	0,000	0,003	Significantly positive effect
BI rate	-7,316	0,005	Significantly negative effect

Data source: processed data, (2020)

The equation of the regression is as follows:
ROA = -1,834 -21,337Inf + 0,0000ER - 7,316BI_Rate
Description
Inf: Inflation
ER: Exchange rate (IDR to US dollar)
BI_Rate: Bank Indonesia interest rates (BI Rate)
ROA: Return On Asset

F test and t test were used in this study. The t test is used to test the effect partially, while the F test is used to prove the effectiveness of the independent variables together with the dependent variable. In the regression model above, the first hypothesis, there is a significant influence of the inflation factor on the ROA of Islamic Commercial Banks in Indonesia. Testing the inflation hypothesis on Return on Assets results that inflation does not have a significant effect on Return on Assets, with sig. 0.089> 0.05. The second hypothesis testing of exchange rates on Return on Assets shows that the exchange rate has a significant effect on ROA, with sig. 0.003 <0.05. The results of the third hypothesis test have resulted that the BI rate has a significant impact on Return on Assets, with sig. 0.005 <0.05. F statistical test to test how the influence of all independent variables together or simultaneously. The F test results are shown as follows:

Table 6. Test Results F

F Count	Sign	Description
8,664	$0,000^b$	significant effect simultaneously

Source: processed data, (2020)

The significance value (sig.) Above is 0.000 <0.05, so it can be concluded that the inflation, BI rate, and exchange rate variables simultaneously influence the profitability of Islamic banking.

The results of the R square determination coefficient (R^2) in this study are shown as follows:

Table 7. Coefficient of Determination R^2

R^2	0.371
Adjusted R^2	0.328

Source: data, processed (2020)

The coefficient of determination yields a number of 0.328 (32.8%) as indicated by the adjusted R^2. meaning that the Inflation, BI rate, and exchange rate together affect the profitability of 32.8%, the remaining 67.2% by other variables but not examined.

4.2. Discussion

Inflation is a process of increasing the prices of goods continuously for a certain period (Hidayati, 2014). The results of this study indicate that inflation does not affect the profitability of Islamic banks. While the exchange rate in this study has a significant effect on the positive direction of ROA. The weaker exchange rate (the value of IDR against the dollar rises) will increase the profitability of Islamic banking. The weakening of the IDR exchange rate can have both positive and negative impacts on banks. This study shows the weakening of the exchange rate causes increased profitability. The turmoil in slowing global economic growth and the weakening of the IDR is good news for Islamic economic practitioners. The overflow of customers from conventional bank customers moves to Islamic banks (Dinar, 2015). According to Deasi Anggraini, manager of Bank Syariah Mandiri so far, Islamic banks have not done a lot of foreign exchange or capital market transactions. Islamic banking is more focused on the real sector. This makes Islamic banks safer in the weakening of the IDR. According to Deasi, BSM banks representing Islamic banking in general in Indonesia experienced an increase both in terms of savings and financing applications. Customers prefer Islamic banks because there is a guarantee of certainty. Also, some conventional bank customers deliberately move their money to Islamic banks in case conventional bankruptcy occurs. Another thing that supports Islamic bank financing is preferred because financing is fixed, up to 15 years so it is not affected by the ups and downs of the dollar.

BI rate in this study has a significant effect on ROA in a negative direction. The higher the BI rate, the lower the profitability of Islamic banking and vice versa. Indonesia's central bank tends to reduce the BI rate from 7.50% to 4.25%. A decrease in the BI rate causes the demand for credit to increase, thereby increasing financing in Islamic banking. This means that there is an increase in the amount of funding distribution. Increased distribution of funding led to an increase in the profitability of Islamic banking.

5. CONCLUSIONS

The results of this study indicate that inflation does not affect the profitability of Islamic banking in Indonesia. While the exchange rate has a significant negative effect on profitability. The exchange rate variable in Indonesia tends to weaken and tends to increase the profitability of Islamic banking in Indonesia. Islamic banking does not do a lot of transactions in foreign exchange or capital markets. Islamic banking is more focused on the real sector. This makes Islamic banks safer in the weakening of the IDR. Some conventional bank customers deliberately move their money to Islamic banks in case conventional bankruptcy occurs. While the BI rate variable has a significant positive effect on Islamic banking. A decrease in the BI rate in Indonesia caused credit demand to increase, resulting in increased Islamic banking financing. This means that there is an increase in the amount of funding distribution. Increased distribution of funding led to an increase in the profitability of Islamic banking.

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