THE EFFECT OF INFLATION, INTEREST RATE, AND GROSS DOMESTIC PRODUCTS ON THE PROFITABILITY OF SHARIA BANKING IN INDONESIA (Sharia Banking Financial Reports 2014-2018)

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Abstract — This study aims to determine the effect of inflation, interest rates, and gross domestic product on Islamic banking’s profitability in Indonesia. The research approach is a quantitative research using data in the form of time series in the 2014-2018 Islamic bank financial statements. The method used is descriptive statistical analysis, classic assumption test, and multiple regression equation tests using the SPSS 21 computer program. Based on the results of the research conducted, it can see that partially shows that inflation has a significant influence on the Profitability of Islamic Banking in Indonesia with smaller t counts from t table that is equal to 0.219 smaller than 2.040 and a significant value of 0.828 smaller than 0.999, the interest rate variable partially has a significant effect on the Profitability of Islamic Banking in Indonesia with t count smaller than t table that is -0.918 smaller than 2.040. A significant value of 0.365 is smaller than 0.999. The GDP variable significantly affects the Profitability of Islamic Banking in Indonesia with a count smaller than the t table that is equal to 0.371 smaller than 2.040 and a significant value of 0.713 smaller than 0.999. So it was concluded that the ups and downs of Sharia Banking Profitability are influencing by Inflation, Interest Rates, and Gross Domestic Product.

Keywords — Inflation, Interest Rate, gross domestic product, Profitability

I. INTRODUCTION

Given the critical role and function of Islamic banking in Indonesia, the Islamic bank must improve its performance to create banking with Islamic principles that are healthy and efficient. However, as a company that is also profit-oriented, Islamic banks still have the ultimate goal of obtaining maximum profits to smooth the company's life cycle. One of the indicators for evaluating bank financial performance is the level of profitability.

Profitability is the company's ability to seek profits and generate profits effectively and efficiently. This is indicated the company's profit from sales and investment income made by the company. The point is that profitability shows the efficiency of the company. With more and more profits generated by a bank, it shows that the bank's financial performance can be useful (Kasmir, 2014).

Measurement of the level of profitability can use the Return of Assets (ROA) ratio. Based on BI Circular No. 3/30 / DPNP dated December 14, 2001, ROA is a measurement of a bank's financial performance in obtaining a profit before tax from the bank's total assets. ROA is the most objective measurement method based on available accounting data in financial reports, and the amount of ROA can reflect the results of a series of company policies, especially banking (Swandayani & Kusumaningtias, 2012).
Table 1

<table>
<thead>
<tr>
<th>Year</th>
<th>Inflation (%)</th>
<th>Interest Rate (%)</th>
<th>PDB (Triliun RP)</th>
<th>ROA (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>8.36%</td>
<td>7.75%</td>
<td>10.542</td>
<td>0.41</td>
</tr>
<tr>
<td>2015</td>
<td>3.35%</td>
<td>7.50%</td>
<td>11.540</td>
<td>0.49</td>
</tr>
<tr>
<td>2016</td>
<td>3.02%</td>
<td>4.75%</td>
<td>12.406</td>
<td>0.63</td>
</tr>
<tr>
<td>2017</td>
<td>3.61%</td>
<td>4.25%</td>
<td>13.588</td>
<td>0.63</td>
</tr>
<tr>
<td>2018</td>
<td>3.13%</td>
<td>6.00%</td>
<td>14.837</td>
<td>1.26</td>
</tr>
</tbody>
</table>


Based on (Table 1) shows the change in the number of profitability ratios achieved by Islamic Commercial Banks using the Return on Assets (ROA) ratio obtained from 2014 - 2018 has increased in the last five years. The value of Return On Asset (ROA) in 2014 was 0.41%, then increased by 0.49% in 2015, then increased again by 0.63% in 2016 in 2017 there was no increase, namely by 0.63% and in in 2018 an increase of 1.26%.

Development of the level of bank profitability requires information on the factors that affect profitability. One of the factors that influence the condition of a bank's profitability is the macroeconomy. In this regard, macroeconomic factors such as national income include the gross domestic product (GDP) and gross national product, economic growth rates, inflation rates, and interest rates.

The data displayed in (Table 1) explains that inflation, interest rates (Bi rate), and gross domestic product (GDP) in Indonesia are fluctuating. Fluctuation can be seen in inflation, which decreased in 2014 by 8.36% to 2016 by 3.02% and increased again in 2017 by 3.61% and decreased again in 2018 by 3.13%. The interest rate (Bi rate) decreased in percentage from 2014 to 2017, but in 2018 it increased by 6.00%. Meanwhile, the gross domestic product (GDP) has increased over the past five years.

The occurrence of inflation can cause uncertainty in the macroeconomic conditions, which results in people using their funds more for consumption. High prices and fixed income or income increase according to the magnitude of inflation, making people not have excess funds to be saved in savings or investment.

The high rate of inflation can have an impact on the banking sector. Therefore, Bank Indonesia also needs to set an appropriate interest rate (BI Rate) as the basis or benchmark for commercial and private banks to determine interest rates to remain liquid and profitable.

The growing interest rate (BI rate) becomes one factor for banks to determine the number of interest rates offered to the public. Interest rates affect the public's desire and interest to invest in the bank through the products offered. The impact on the bank itself, namely the increasing number of funds invested by the public, will increase the ability of the bank to channel these funds in the form of credit wherefrom the credit channeled, the bank makes a profit so that the more credit channeled has an impact on the amount of income it earns Bank (Dewi, 2018).

The profitability of Islamic banking is also determined by the gross domestic product (GDP) variable. Gross domestic product (GDP) is the value of goods and services produced in that country in a specific year. Saving in a country is greatly influenced by the community's amount of income, not influenced by the interest rate. This indicates that the greater the country's GDP, the higher the people's ability to save. It will be able to increase the profitability of Islamic banking (Sadono Sukirno, 2016). Based on the description above, the authors are motivated to conduct a research entitled "The Effect of Inflation, Interest Rates, and Gross Domestic Product on the Profitability of Islamic Banking in Indonesia." This study aimed to determine the effect of inflation, interest rates, and gross domestic product on Islamic banking in Indonesia. Indonesia for the period 2014-2018.
Several previous studies support current research, namely research from Islamiyah (2016) with the title "The Effect of Financing to Deposit Ratio (FDR), Third Party Funds (TPF), and Non-Performing Financing (NPF) on Profitability (Study at Bank Syariah Mandiri 2008-2015)”. The study results indicate that the FDR, DPK, and NPF have a significant effect on profitability in independent Islamic banks for the period 2008-2015. Furthermore, research from Badruzzaman (2018) entitled "The Effect of Macroeconomic Variables on the Distribution of Murabahah Financing in Islamic Commercial Banks in Indonesia for the 2016-2018 Period”. The results of the study show that the BI interest rate, the inflation rate, and the rupiah exchange rate against the US dollar have an effect on the distribution of Murabahah financing to Islamic Commercial Banks in Indonesia for the 2016-2018 period.

Another study from Sodiq (2014) entitled "Analysis of the Influence of Inflation, Gross Domestic Product and the Money Supply on the Return on Assets of Islamic Banks for the 2009-2012 period". The study results show that the inflation variable, Gross Domestic Product, and the Money Supply have a significant effect on the Return on Assets of Islamic banks in the 2009-2012 period. Rahman and Rochmanika (2012), with the title “The Effect of Buying and Selling Financing, Profit Sharing Financing, and Non-Performing Financing Ratios on the Profitability of Islamic Commercial Banks in Indonesia.” results of this study indicate that the Buying and Selling Financing, Profit Sharing and NPF have a significant effect on the profitability of Islamic commercial banks in Indonesia. Moreover, the previous research from Sukma (2013) entitled “The Effect of Third Party Funds, Capital Adequacy, and Credit Risk on Profitability." The study results show that third-party funds, capital adequacy, and credit risk have a significant effect on profitability.

With the existing background and literature review, the researcher can formulate a hypothesis, namely:

H1: It is suspected that there is a significant effect of inflation on the Profitability of Islamic Banking in Indonesia for the 2014-2018 period.
H2: It is suspected that there is a significant effect of Interest Rates (Bi rate) on Islamic banking's profitability in Indonesia for the 2014-2018 period.
H3: It is suspected that there is a significant effect of Gross Domestic Product (GDP) on the Profitability of Islamic Banking in Indonesia for the 2014-2018 period

II. METHOD

This type of research used in this research is to use descriptive quantitative methods. Quantitative research with a descriptive format aims to explain, summarize various conditions, various situations, or various variables that arise in the society, which is the research object based on what happened (Gujarati, 2004).

Population and Sample

A population is a group of complete elements, in the form of people, objects, transactions, or events where we are interested in studying it or making it the research object. At the same time, the sample is part of the real object of the study (Stapleford, 2017). The sample in this study was 7 Islamic Commercial Banks in Indonesia from 2014 to 2018.

Operational definition

The variables used in this study include the dependent variable and the independent variable. The dependent variable is profitability, and the independent variable includes inflation, interest rates, and gross domestic product.

a. Inflation

Inflation is an economic condition characterized by a rapid increase in prices resulting in a decrease in purchasing power, often followed by a decrease in savings and or investment due to increased public consumption and little for long-term savings. Based on the reasons for this, inflation can be divided into three types, namely:

1. Demand full inflation (inflation as a result of demand-pull), an increase in public demand for consumer goods that encourages the government and entrepreneurs to increase investment through credit.
2. Cost-push inflation (inflation due to cost pressure) is inflation caused by increased production costs.
3. Inflation caused by the government printing much money. Inflation can also occur due to the government through the central bank printing too much money because it wants to serve the demand for credit from the general public and the business world in particular (Hagemann, 2019)

b. Interest Rate
The interest rate (BI Rate) is a policy interest rate that reflects the monetary policy stance or stance set by Bank Indonesia and announced to the public. The BI Rate is announced by the Board of Governors monthly and implemented in monetary operations conducted by Bank Indonesia through liquidity management. In the money market to achieve the operational targets of monetary policy. In considering interest rates, several factors are taken into consideration, namely:
1. Inflation. If inflation is rising, Indonesian banks will usually raise interest rates so that the demand for goods and services can be reduced to reduce inflation.
2. Economic growth, when the national economy moves too fast, which is usually accompanied by high inflation, Bank Indonesia will raise interest rates to reduce the circulation of money in society (Kasmir, 2014).

c. PDB
Gross domestic product (GDP) is the market value of all finished goods and services produced during a specific period by production factors located in a country. The gross domestic product can determine through the following approaches:
1. The production approach is an added value created in the production process. This method calculates national income based on the total value of goods and services generated from each economic sector in a certain period.
2. The expenditure approach leads to the expenditure of the economic sector in a country. The expenditure approach is carried out by adding up all expenditures for various economic sectors, namely households, companies, government, and the foreign sector (exports and imports) of a country in a certain period (Fair, 2008).

d. Profitability
The definition of profitability is showing the company's ability to generate profits over a certain period. The profitability of a company is measured by the company's success and the ability to use its assets productively. Thus, the profitability of a company can be determined by comparing the profits earned in a period with the assets or the company's amount of capital. In profitability, there are several formulas used, including:
1. Gross profit margin
2. Operating profit margin
3. Operating ratio
4. Net profit margin
5. Return on assets

Data Analysis
Analisis data yang digunakan dalam penelitian ini adalah analisis deskriptif, uji asumsi klasik, analisis regresi linier berganda, koefisien determinasi (R²) dan untuk uji hipotesis menggunakan uji f untuk mengetahui pengaruh variabel bebas secara bersama-sama terhadap variabel terikat serta menggunakan uji t untuk mengetahui pengaruh variabel bebas secara parsial terhadap variabel terikat.

III. RESULT AND DISCUSSION

Regression Analysis
Multiple linear regression analysis is used to analyze and determine the level of significance and determine which variable has the most influence on the dependent variable. Multiple linear regression can calculate the influence of the independent variables (Inflation, Interest Rates, and Gross Domestic Product) on the dependent variable Profitability (ROA).

Table 2
Multiple Linear Regression Analysis Test Results and the Regression Equation

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>t count</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>2.204</td>
<td>0.230</td>
<td>0.819</td>
</tr>
<tr>
<td>Inflation</td>
<td>0.088</td>
<td>0.219</td>
<td>0.828</td>
</tr>
<tr>
<td>Interest Rate</td>
<td>-0.506</td>
<td>-0.918</td>
<td>0.365</td>
</tr>
</tbody>
</table>
Based on the summary table above the results of the regression analysis, as shown in the summary table above, the regression equation is obtained, namely:

\[ \text{ROA} = 2.204 + 0.088 \text{ Inflation} - 0.506 \text{ Interest Rate} + 0.209 \text{ PDB}. \]

The regression equation above shows a constant value of 2.204, which states that if the inflation, interest rate, and GDP variables are considered constant, then the average ROA is 2.204.

**Coefficient of Determination \( (R^2) \)**

Based on the multiple linear regression analysis results, the coefficient of determination shown by the \( R^2 \) is 0.063. This reflects that 6.3% of the variable results of inflation, interest rates, and GDP affect the profitability of Islamic banking. Moreover, the remaining 93.7% is explained by other variables not examined in this study.

**Hypothesis testing**

The \( t \)-test or partial test is used to determine whether the independent variables (inflation, interest rates, and GDP) significantly affect the dependent variable Profitability (ROA). The level of decision making from the \( t \)-test or partial test, if the significance value is 0.999, means that \( H_0 \) is rejected. The independent variable has a significant effect on the dependent variable.

In the inflation variable, the \( t \) value is 0.219 and the sig value. Equal to 0.828, so because the \( t \) count value is smaller than the \( t \) table, namely 0.219 is smaller than 2.040 and the value of sig. Smaller than 0.999, which is 0.828 less than 0.999, shows that the inflation variable has a significant effect on the profitability of Islamic banking in Indonesia for the 2014-2018 period, so \( H_1 \) is accepted.

In the interest rate variable, the \( t \) value is -0.918 and the sig value. Amounting to 0.365 so that the value of \( t \) count is smaller than the \( t \) table, namely -0.918 is smaller than 2.040 and the value of sig. Smaller than 0.999, which is 0.365 less than 0.999, shows that the interest rate variable has a significant effect on the profitability of Islamic banking in Indonesia for the 2014-2018 period, then \( H_2 \) is accepted.

In the GDP variable, the \( t \) value is 0.371 and the sig value. Equal to 0.713 so because the \( t \) count value is smaller than the \( t \) table, namely 0.371 smaller than 2.040 and the value of sig. Smaller than 0.999, which is 0.713 less than 0.999, shows that the GDP variable has a significant effect on the profitability of Islamic banking in Indonesia for the 2014-2018 period, then \( H_3 \) is accepted.

**F Test**

The \( F \) test or simultaneous test is a test that aims to determine whether the independent variables (inflation, interest rates, and GDP) together have a significant effect on the dependent variable Profitability (ROA). The independent variable is said to have a significant effect if the sig value is smaller than 0.999.

Based on the test results in table 2, it can be explained that the value of \( f \) calculated is smaller than \( f \) table, namely 0.693 is smaller than 2.90 and the sig value is smaller than 0.999, namely 0.564 is smaller than 0.999, so it can be concluded that \( H_0 \) is accepted, which means that Simultaneously significant inflation, interest rates and GDP on the profitability (ROA) of Islamic banking in Indonesia for the 2014-2018 period.

Based on the results of research and data analysis that has been carried out in the previous discussion assisted by the SPSS 21 program, it can be seen that the results of the regression analysis show that three variables, namely inflation, interest rates, and GDP, from the results of the \( F \) test in table 10 obtained \( f \) count of 0.693 with a significant value of 0.564 is smaller than 0.999. Because it is significantly smaller than 0.999, it can be concluded that there is a significant simultaneous effect of inflation, interest rates, and GDP on the profitability (ROA) of Islamic banking in Indonesia for the 2014-2018 period. The partial analysis of the discussion in this study is as follows:

<table>
<thead>
<tr>
<th>PDB</th>
<th>0.209</th>
<th>0.371</th>
<th>0.718</th>
</tr>
</thead>
<tbody>
<tr>
<td>R square</td>
<td>0.063</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F hitung</td>
<td>0.693</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sumber: Data Diolah, tahun 2019
The Influence of Inflation on the Profitability (ROA) of Islamic Banking in Indonesia

Inflation is an economic symptom that shows a continuous increase in the price level in general. The condition for inflation is that there is a general and continuous increase in prices. Inflation is a condition that indicates weaker purchasing power, followed by a decline in the real (intrinsic) value of a country's currency. From the results of research using the SPSS 21 program, it can be concluded that inflation has no effect on the profitability of Islamic banking in Indonesia for the 2014-2018 period. Based on the results of testing partially, the effect of inflation on profitability obtained at count of 0.219 with a significance of 0.828. Because of sig. 0.828 is smaller than 0.999, thus indicating that the inflation variable significantly influences the profitability variable (ROA) of Islamic banks in Indonesia for the 2014-2018 period. The results of this study, at the same time, provide support for the results of previous research by Syahirul Alim research (2014) in his research that the results show that inflation has a positive effect on bank profitability.

The Effect of Interest Rates on the Profitability of Islamic Banking in Indonesia

Interest rate is a policy interest rate that reflects the monetary policy stance or stance set by Bank Indonesia and announced to the public. From the results of the above research using SPSS 21, it can be concluded that interest rates have no effect on the profitability of Islamic banking in Indonesia for the 2014-2018 period, where seen from the partial test results obtained t count of -0.918 with a significant value of 0.365. Because of the sig. 0.365 is smaller than 0.999, thus indicating that the interest rate variable has a significant influence on the profitability variable (ROA) of Islamic banks in Indonesia for the 2014-2018 period. The results of this study are also supported by research by Leila Nur Latifa (2016) in her research, explaining that interest rates affect the profitability of Islamic banking in Indonesia. This means an increase will follow the BI interest rate increase in the interest rate for conventional savings. Also, an increase in bank interest rates will affect the operational activities of Sharia Banks in terms of financing and distribution of funds, so that the income and profit of Islamic banks will decrease.

The Influence of Gross Domestic Product (GDP) on the Profitability of Islamic Banking in Indonesia

Gross Domestic Product (GDP) is the market value of all final finished goods and services produced during a certain period by the production factors located in a country. From the results of research using the SPSS 21 program, it is known that the GDP variable has no effect on the profitability of Islamic banking in Indonesia for the 2014-2018 period. Where seen from the partial test results obtained t count of 0.371 with a significant value of 0.713. Because of the sig. 0.713 is smaller than 0.999, thus indicating that the GDP variable significantly influences the profitability variable (ROA) of Islamic banks in Indonesia. The results of this study are also supported by research by Amirus Sodiq (2014) in his research explaining that an increase in the value of a country's GDP shows an increase in people's welfare, and this will undoubtedly have an impact on increasing aggregate demand and should be balanced with economic growth in the real sector, increasing social welfare will certainly increase. Followed by an increase in public savings at the bank, which will positively affect bank income, which will increase Bank profitability.

VI. CONCLUSIONS

Based on the results of the analysis and discussion of the effect of inflation, interest rates, and gross domestic product (GDP) on the profitability of Islamic banking in Indonesia for the 2014-2018 period, the following conclusions can be drawn:

Based on the results of data processing through SPSS 21, it can be concluded that inflation has a significant effect on the Profitability of Islamic Banking in Indonesia for the 2014-2018 period. This can be seen from the partial test (T-test) with a t value of 0.219 and a sig value. Amounting to 0.828 so because the t count's value is smaller than the t table, namely 0.219 is smaller than 2.040, and the significant value is smaller than 0.999, namely sig. 0.828 is smaller than 0.999, which means that H0 is rejected and H1 is accepted.

Based on the results of data processing through SPSS 21, it can be concluded that interest rates have a significant effect on the profitability of Islamic banking in Indonesia for the 2014-2018 period. This can be seen from the partial test (T-test) with the t value of -0.918 and the sig value. Amounting to 0.365 so that the t count's value is smaller than t table, namely 0.918 is smaller than that of 2.040, and the significant value is smaller than 0.999, namely sig. 0.365 is smaller than 0.999, which means that H0 is rejected and H2 is accepted.
Based on the results of data processing through SPSS 21, it can be concluded that the Gross Domestic Product (GDP) has a significant effect on the Profitability of Islamic Banking in Indonesia for the 2014-2018 period. This can be seen from the partial test (T-test) with a t value of 0.371 and a sig value. Amounting to 0.713 so because the t count value is smaller than t table, namely 0.371 is smaller than 2.040, and the significant value is greater than 0.05, namely sig. 0.713 is smaller than 0.999, which means that H0 is rejected and H3 is accepted.

ACKNOWLEDGMENT

Based on the conclusions that have been stated, several suggestions are given, which are expected to be of benefit to those in need. Islamic banking is expected to improve its financial performance further to maximize its profitability level, especially by paying attention to external and internal factors. For further research, it is expected to expand the population and sample, and further researchers are expected to be able to develop this research by involving other variables that affect the profitability of Islamic banking in Indonesia. The results of this research are expected to be a source of information and add insight to the community to be the basis for making decisions in investing.

References

[20] Salemba Empat


