ABSTRACT

**Aims:** This article focuses on discussing the effect of Return on Assets (ROA), Operational Efficiency Ratio (BOPO), Inflation, Credit Interest Rates, and Gross Domestic Product of Murabahah Financing in Sharia banking in Indonesia for the 2016-2019 period.

**Study Design:** Descriptive quantitative research is used with financial reports from Indonesian Sharia banking in 2016-2019 involved.

**Place and Duration of Study:** It obtains 13 sharia banking in Indonesia from 2016-2019 financing data.

**Methodology:** Through descriptive research, the researcher will explain whether Return on Assets (ROA), Operational Efficiency Ratio (BOPO), Inflation, Credit Interest Rates, and Gross Domestic Product of Murabahah Financing in Sharia banking in Indonesia influence each other. The data analysis technique in this study uses multiple regression with the help of the SPSS 25 application.

**Results:** In accordance with the results of the f test, all independent variables, namely ROA, BOPO, inflation, CIR and GDP have a significant effect simultaneously on Murabahah financing. The results of the t-test explain that ROA has a significant positive effect on Murabahah financing, BOPO has no effect on Murabahah financing, inflation has a significant positive effect on...
Murabahah financing, CIR has a significant negative effect on Murabahah financing, and GDP has a significant positive effect to Murabahah financing.

**Conclusion:** According to the research conducted above, it can be concluded that the ability to explain the independent variable on the Murabahah financing variable is 59.4%. Other than that, other research that involves other variables and longer data need to be conducted to know more what affect muharabah financing in Indonesia.

**Keywords:** Murabahah Financing; Indonesia Sharia Banking.

### 1. INTRODUCTION

Sharia banking in Indonesia has experienced a very significant development along with the development of society's thought regarding the interest-free Sharia banking system. It seems that sharia banking is a combination of commercial banks, investment banks, and investment-management institutions [1]. Sharia banking is oriented towards capital investment; with this pattern, sharia financial institutions will be stronger against the threat of crisis compared to conventional banking, and far from borrowing short and leading long behavior [2].

Since the beginning of the development of sharia banking in Indonesia, in terms of financing, Murabahah contracts have dominated sharia bank financing, but many criticisms have been leveled at Sharia banks in terms of determining profit margins [3]. This is because the Murabahah financing product is a product similar to a flat-interest credit financing product at non-sharia banks or conventional banks. Murabahah financing is the sale and purchase of goods at the original price with an agreed additional profit [4]. The development of islamic commercial bank financing in Indonesia can be seen in the table.

Sharia banks are stated in an agreement/contract which is the basis for their financing activities [5]. Sharia financing contracts facilitate everyone in meeting their needs and interests that cannot be fulfilled on their own without the help of others. One of them is in Murabahah Financing which is the sale and purchase of goods at the original price with an agreed additional profit [6]. In disbursing financing, several factors that can affect Murabahah financing need to be considered so that the disbursed financing can generate profits and minimize unwanted losses. Factors that influence Murabahah financing include Return On Assets (ROA), Operational Efficiency Ratio (BOPO), Inflation, Credit Interest Rate, and Gross Domestic Product (GDP). Some of these factors are chosen because they describe sharia banking performance [7].

According to Solihin [8], factors affecting the bank’s decision in channel financing to debtors is profit profitability which is reflected in Return On Assets (ROA). This ratio is used to measure the bank’s ability to obtain overall profits. The greater the value of this ratio indicates the level of profitability of the bank's business that is getting better or healthier. Stable or healthy ROA ratio reflects the stable amount of capital and bank profits. Stable banking conditions will increase the bank's ability to channel financing.

In addition, according to Agustiani [9], the lower the level of the BOPO ratio means the better the performance of the bank's management, because it is more efficient in using existing resources in the company. A small BOPO value is obtained if the increase in operating income is much higher than operating costs. If the income is large, the costs incurred are small; then, it generates a large profit.

**Table 1. Development of Sharia Banking Financing in Indonesia 2016-2019 Period**

<table>
<thead>
<tr>
<th>Contract</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Murabaha</td>
<td>139,536</td>
<td>150,276</td>
<td>154,805</td>
<td>160,654</td>
</tr>
<tr>
<td>Mudharabah</td>
<td>15,292</td>
<td>17,090</td>
<td>15,866</td>
<td>13,779</td>
</tr>
<tr>
<td>Community</td>
<td>78,421</td>
<td>101,561</td>
<td>129,641</td>
<td>157,491</td>
</tr>
<tr>
<td>Regards</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Qard</td>
<td>4,731</td>
<td>6349</td>
<td>7,674</td>
<td>10,572</td>
</tr>
<tr>
<td>Istishna</td>
<td>878</td>
<td>1,189</td>
<td>1,609</td>
<td>2,097</td>
</tr>
<tr>
<td>Ijarah</td>
<td>9,150</td>
<td>9,230</td>
<td>10,597</td>
<td>10,589</td>
</tr>
<tr>
<td>Total</td>
<td>248,008</td>
<td>285,695</td>
<td>320,191</td>
<td>355,182</td>
</tr>
</tbody>
</table>
According to Francisco [10], the inflation rate will weaken people’s enthusiasm to save (a decrease in the marginal propensity to save) indirectly this will also reduce the availability of funds for banks so that when the inflation rate occurs, it tends to affect how much amount of financing provided by banks to prospective debtors. If inflation increases, the price of goods that will become the object of the transaction will be greatly influenced because it will increase as well. In addition, the customers’ appetite will decrease and Murabahah financing will also decrease.

Credit Interest Rate in Sharia banking is formed because of the suspension of payments which gives the impression that Murabahah financing is no different from the provision of interest-bearing loans by conventional banks. Credit interest rates rise faster when the benchmark interest rate rises, while when the benchmark interest rate falls, banking credit interest rates remain relatively unchanged or change slowly [11].

GDP is an indicator that measures the value of the output of goods and services produced by a country, as well as goods or services produced by foreign companies residing in the country [12]. If GDP increases, the level of public welfare in general will increase; then, people who deposit credit installments from financing will be easily paid to sharia banks.

According to the explanation above, this journal focuses on discussing the effect of Return on Assets (ROA), Operational Efficiency Ratio (BOPO), Inflation, Credit Interest Rates, and Gross Domestic Product of Murabahah Financing in Sharia banking in Indonesia for the 2016-2019 period.

2. THEORITICAL REVIEW

2.1 Return on Assets (ROA)

Return on Assets (ROA) is a ratio that shows the comparison between profit (before tax) and total bank assets. This ratio shows the level of efficiency of asset management carried out by the bank concerned. ROA can be obtained by calculating the ratio between profit after tax and total assets [13].

Other than that, Return On Assets (ROA) which is the ratio between Net Income After Tax on assets as a whole shows a measure of asset productivity in providing returns on investment (Goddess 2019). Return on Assets (ROA) is used to measure the company's effectiveness in generating profits by utilizing its assets. According to Anam and Khairunnisah [14] Return on Assets, the ratio of Return on Assets (ROA) is a measure of the overall profitability of the company.

2.2 Operational Efficiency Ratio (BOPO)

According to Suhadi and Inaroh [15], BOPO is a ratio between total operating costs and total operating income. From this ratio, it can be concluded that the lower the BOPO ratio, the better the performance of the bank’s management because it is more efficient in using existing resources in the company.

This ratio, which is often called the efficiency ratio, is used to measure the ability of bank management to control operational costs against operating income. The smaller the ratio, the more efficient the operational costs incurred by the bank concerned; it makes the possibility of a problematic bank condition is getting smaller [16].

Operational costs are calculated based on the sum of the total interest expense and other total operating expenses. Operating income is the sum of the total interest income and the total other operating income [17].

2.3 Inflation

Inflation is a condition in which the prices of goods have increased over a certain period of time in an economic area [18]. In addition, inflation is a condition when the price level increases continuously and affects individuals, businesses and governments. Inflation is also the rate at which the general prices of goods and services rise and result in a decrease in purchasing power [19]. The increase in prices in inflation occurs from period to period and the rate of increase varies from region to region. The increase in the price of goods in inflation occurs in all goods that have been determined, not just one or two goods. So, if the increase only occurs in one or two goods, it is not called inflation. The impact of inflation is not only on the real sector, but also on the financial sector.

2.4 Credit Interest Rate

The interest rate is the cost of borrowing or the price paid for leasing funds. According According to Gruppe et al. [20], interest rate is the price
paid by the borrower to the lender. Like market prices, the determination of interest rates is determined by the supply and demand of loanable funds. According to Adeleye (2021) interest rate is the annual interest payment of a loan, in the form of a percentage of the loan obtained from the amount of interest received each year divided by the loan amount. Definition of interest rates according to Huang, Jiang, and Wang [21] is the price of the loan. The interest rate is expressed as a percentage of the principal per unit of time. Interest is a measure of the price of resources used by debtors that must be paid to creditors.

2.5 Gross Domestic Product (GDP)

GDP is a measure of national income and output for the economy of a country at a certain time period. The definition of GDP is based on the total market value of all final goods and services produced domestically in a given period of time (in one year). The evaluation process also involves the amount of added value at each stage of production (intermediate stage) of all final commodities (goods and services) produced in a country in a certain period of time in monetary terms [22]. In addition, according to Akbar (2016) in assessing the economic growth of a country, one of which uses Gross Domestic Product or GDP. By looking at the size of GDP in a country, it can be seen how goods or services are produced by a country. If the GDP of a country is good, then the welfare of the people can be considered to be improving [23].

2.6 Murabahah Financing

Murabahah is a term in Islamic jurisprudence in a certain form of buying and selling when the seller states the cost of acquiring the goods, including the price of the goods and other costs incurred to obtain the goods and the desired level of profit (margin). Payments can be made in spot (cash) or at a later date mutually agreed upon [7]. Other than that, Murabahah financing is a sale and purchase agreement of goods by stating the acquisition price and profit (margin) agreed upon by the seller and the buyer. This contract is a form of natural certainty contracts, because in Murabahah, it is determined what the required rate of profit is (the profit costumers want to get) [24].

3. RESEARCH METHODS

This research is included in descriptive quantitative research. Sugiono [25] said that research method is basically scientific characteristics to obtain data with certain goals and uses. The method used is in quantitative approach. According to Ardianto [26], descriptive research is research that uses observations, interviews, or questionnaires related to the current state of the subject being researched. Through this descriptive research, the researcher will explain what actually happened regarding the current state that is being studied. This study uses financial reports from Indonesian Sharia banking in 2016-2019. The sampling used is purposive sampling technique with criteria of 3. Thus, it obtains 13 banking in Indonesia. The data analysis technique in this study uses multiple regression with the help of the SPSS 25 application.

4. RESULT AND DISCUSSION

4.1 Classic Assumption

4.1.1 Normality test

This normality test aims to determine whether the resulting error has a normal distribution in a regression model (Santoso, 2012:230). The Kolmogorov-Smirnov test is used to check for normality. If the significance value of Kolmogorov-Smirnov test is > 0.05, then the normality assumption is met.

According to the table above, it shows that the data has a statistical test value of 0.644 and a significance value above 0.05, which is worth 0.794. Thus, it can be stated that the data has been distributed normally. The result can be illustrated in the graph.

<table>
<thead>
<tr>
<th>Model</th>
<th>Test Statistics</th>
<th>asymp. Sig. (2-tailed)</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unstandardized Residual</td>
<td>.644</td>
<td>.794c</td>
<td>Normal</td>
</tr>
</tbody>
</table>

Table 2. Data statistics
Fig. 1. Normal P-P plot of regression standardized residual dependent variable: Murabahah

Table 3. Results of the multicollinearity test

<table>
<thead>
<tr>
<th>Model</th>
<th>Collinearity Statistics</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tolerance</td>
<td>VIF</td>
</tr>
<tr>
<td>(Constant)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROA</td>
<td>.915</td>
<td>1.093</td>
</tr>
<tr>
<td>BOPO</td>
<td>.905</td>
<td>1.105</td>
</tr>
<tr>
<td>inflation</td>
<td>.130</td>
<td>1.717</td>
</tr>
<tr>
<td>CIR</td>
<td>.105</td>
<td>2.494</td>
</tr>
<tr>
<td>GDP</td>
<td>.187</td>
<td>3.559</td>
</tr>
</tbody>
</table>

4.2 Multicollinearity Test

The purpose of this multicollinearity test is to check whether there is a correlation between the independent variables in the (free) regression model. In a good regression model, there should be no correlation between the explanatory variables. If there is a correlation, it is called a multicollinearity (multico) problem. To find out whether there is multicollinearity, it is done by looking at the tolerance value and Variance Inflation Rate (VIF) value contained in each variable. Based on the VIF and Tolerance rules, it is said that multicollinearity symptoms occur; on the contrary, if VIF is less than 10 or the tolerance is greater than 0.10 it is said that there are no multicollinearity symptoms. The results of the multicollinearity test are shown in the table.

From the table above, it is known that for all variables have no multicollinearity data. It is because the VIF value is smaller than 10 and the tolerance value is above 0.10.

4.3 Auto-correlation Test

This test aims to determine whether there is a correlation between the confounding error in period t and the error in period t-1 (previous) in a linear regression model. The autocorrelation test used the Durbin-Watson Test (DW).

<table>
<thead>
<tr>
<th>DL</th>
<th>DU</th>
<th>DW</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.3090</td>
<td>1.8183</td>
<td>1964</td>
<td>No autocorrelation</td>
</tr>
</tbody>
</table>
With the value of Du of 1.8183 and DL 1.3090, it can be seen that the Durbin-Watson value obtained is 1.964, where this value is DU greater than 1.8183 and smaller than 4-DU at 2.1817. As for the basis for decision making in the Durbin-Watson test above, it can be concluded that model 1 has no problems or symptoms of autocorrelation. Thus, multiple linear regression analysis to test the research hypothesis above can be carried out or continued.

4.4 Hypothesis Testing

4.4.1 Multiple regression

In this study, the unstandardized coefficient beta value is used to determine the multiple linear regression equation.

From the results of multiple linear regression calculations in the table above, it can be seen the relationship between the independent variable and the dependent variable which can be formulated in the following equation.

\[
\text{Murabaha} = + 0.118 \text{ROA} + 0.013 \text{BOPO} + 0.25 \text{Inflation} - 0.118 \text{CIR} + 0.357 \text{GDP} + \varepsilon
\]

From the explanation of the formula above, it can be seen that the increasing ROA can affect Murabahah by 0.11, if the BOPO increases it will increase Murabahah by 0.013, if inflation increases it will increase Murabahah by 0.25; in addition, if the CIR increases it will decrease Murabahah by 0.25. 0.118 and if GDP increases it will decrease Murabaha by 0.357.

F-Test: The first hypothesis testing is done through the F-test which shows whether all the independent variables included in the model have a joint influence on the dependent variable. The results of the calculation of the simultaneous test (F-test) are as follows.

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Regression</td>
<td>179055374290596.620</td>
<td>5</td>
<td>35811074858119.320</td>
<td>.953</td>
<td>.000b</td>
</tr>
<tr>
<td>Residual</td>
<td>1728718750436855.800</td>
<td>46</td>
<td>37580842400801.210</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>190777412477452.500</td>
<td>51</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From the results of the F test, it can be seen that the F-count value is 0.953 and the F significance is 0.000. So Sig F < 5%. This shows that all independent variables, namely ROA, BOPO, inflation, CIR and GDP have a significant effect simultaneously (together) on Murabahah.

R-Square Test: The results of the coefficient of determination can be seen in the table as follows

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.306a</td>
<td>.594</td>
<td>-.005</td>
<td>6130321.558</td>
</tr>
</tbody>
</table>
Table 6. T-test

<table>
<thead>
<tr>
<th></th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td></td>
<td>-.008</td>
<td>.993</td>
<td></td>
</tr>
<tr>
<td>ROA</td>
<td>.188</td>
<td>3.281</td>
<td>.021</td>
<td>Significantly positive effect</td>
</tr>
<tr>
<td>BOPO</td>
<td>.013</td>
<td>.745</td>
<td>.176</td>
<td>No effect</td>
</tr>
<tr>
<td>inflation</td>
<td>.250</td>
<td>2.128</td>
<td>.000</td>
<td>Significantly positive effect</td>
</tr>
<tr>
<td>CIR</td>
<td>-.118</td>
<td>-2.042</td>
<td>.010</td>
<td>Significantly negative effect</td>
</tr>
<tr>
<td>GDP</td>
<td>.357</td>
<td>2.119</td>
<td>.006</td>
<td>Significantly positive effect</td>
</tr>
</tbody>
</table>

The adjusted R-Square value (coefficient of determination) shows a value of 0.594. It means that the ability to explain the independent variable to the dependent variable. The firm value is 59.4% while the remaining 40.6% is explained by other variables outside the 5 independent variables included in the model.

Based on the t-test above, it is known that the relationship between each variable is as follows.

4.5 ROA on Murabahah Financing

ROA obtained a significance value (p-value) of 0.021 and a regression coefficient of 0.188 because the significance of the value of is less than 5% (0.021<0.05) and a t-count of 3.281 is obtained, which is greater than the t-table value of 1.674 (3.281>1.674), then partially ROA has an influence on financing. Murabahah is positively significant. The greater the level of profit (ROA) obtained by the bank, the greater the management’s efforts to invest these profits with various activities that benefit management, especially by channeling financing. In addition, the greater a bank generates a profit, the bank has been effective in managing its assets. The results of this study are in line with research conducted by Misbah (2016) which states that ROA has a significant influence on Murabahah financing [27–29]. However, this research contradicts the research conducted by Munir (2016) who explains that BOPO has a negative effect on Murabahah financing.

4.6 BOPO on Murabahah Financing

BOPO obtained a significance value (p-value) of 0.176 and a regression coefficient of 0.013 because the significance of the value of is greater than 5% (0.176>0.05) and a t-count of 0.745 is obtained, which is smaller than the t-table value of 1.674 (0.745<1.674) then partially the BOPO variable has no effect on murabaha financing. The result of this study is in line with research conducted by Anisa Wahyuningrum (2019) who explains that BOPO has no effect on Murabahah financing [30–32]. The results of this study are in contrast to the research conducted by Munir (2016) who states that BOPO has a negative effect on Murabahah financing. This hypothesis means that the greater the BOPO variable, the Murabahah Financing will also increase. It is because the level of efficiency of the bank in carrying out its operations affects the income generated by the bank.

4.7 Inflation on Murabahah Financing

Inflation obtained a significance value (p-value) of 0.000 and a regression coefficient of 0.250 because the significance of the value of is less than 5% (0.000<0.05) and a t-count of 2.128 is obtained, which is greater than the t-table value of 1.674 (2.128>1.674) then partially the inflation variable has a positive influence. Significant to murabaha financing. When inflation occurs, it will disrupt the saving function, people will be reluctant to save because the value of the currency will decrease. In the end, they will choose Sharia banking financing instead because all sharia banking products have no effect on inflation. The results of this study are in line with research conducted by Chendrawan (2016) who states that inflation has a significant positive effect on Murabahah financing [33–35].

4.8 CIR on Murabahah Financing

CIR obtained a significance value (p-value) of 0.010 and a regression coefficient of -0.118 because the significance of the value of is less than 5% (0.010<0.05) and a t-count of -2.042 is obtained, which is smaller than the t-table value of 1.674 (-2.042<1.674) then partially the CIR variable has an effect to Murabahah financing in a significant negative manner. The results of this study are in accordance with research conducted by Ali and Miftahurrrohman (2016) who states that the CIR or credit interest rates have a negative
effect on Murabahah financing [28], [36]. It means that every time the interest rate on domestic loans is increased, murabahah financing will also decrease [37,38]. The results of this study contradict the hypothesis that credit interest rates have a positive effect on Murabahah financing, meaning that an increase in the average interest rate for commercial bank investment loans will have an impact on increasing Murabahah financing' interest rates, the average interest rate of commercial bank loans will cause investors to turn to look for funding sources or other sources of financing, one of which is murabahah profit sharing financing, or in other words, traditional profit sharing financing. Bank credit has a surrogate relationship.

4.9 GDP on Murabahah Financing

GDP obtained a significance value (p-value) of 0.006 and a regression coefficient of 0.357 because the significance of the value is less than 5% (0.006 < 0.05) and a t-count of 2.119 is obtained, which is greater than the t-table value of 1.674 (2.119>1.674) then partially GDP variable has a positive significant influence to murabaha financing. The results of this study are in line with research conducted by Ali and Miftahurrohman (2016) who states that GDP has an effect on murabaha financing. An increase in GDP will lead to an increase in Murabahah financing. GDP is an indicator used to measure the level of a country's economy. GDP can also be used to examine a country's level of spending over a certain period of time. The higher the country's GDP, the better the country's economy and the higher the country's GDP. Amount of Government Expenditure with Social Income. An increase in welfare is usually accompanied by an increase in consumption. This includes the desire to own certain raw materials, and Sharia products used in consumer financing, buying and selling financing through Murabahah contracts. Therefore, it can be concluded that an increase in GDP will have a positive impact on the level of murabahah financing from Indonesian Islamic Banks.

5. CONCLUSION

According to the research conducted above, it can be concluded that the ability to explain the independent variable on the Murabahah financing variable is 59.4%. In accordance with the results of the t test, all independent variables, namely ROA, BOPO, inflation, CIR and GDP have a significant effect simultaneously on Murabahah financing. The results of the t-test explain that ROA has a significant positive effect on Murabahah financing, BOPO has no effect on Murabahah financing, inflation has a significant positive effect on Murabahah financing, CIR has a significant negative effect on Murabahah financing, and GDP has a significant positive effect to Murabahah financing.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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