Determinant of Islamic Banking Profitability in Indonesia

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Abstract
Finding a determinant of profitability has become one of the most popular topics in banking research. Previous research has identified many factors that significantly influence bank profitability. There are also many studies that measure the effectiveness of sharia banking globally, but few analyze the profitability issues of sharia banks. This study aims to analyze the impact of factors affecting profitability in Islamic Banks listed on the Indonesia Stock Exchange. The method used was multiple linear regression analysis. The variables were return on assets as dependent variable and murabahah, mudarabah, branch office, cash office, and Automatic Teller Machine as independent variables. This study found that funding factors, such as murabahah, mudarabah, and conventional and electronic networking factors, such as branch office, cash office, and ATM, had positive and significant impact on profitability of sharia bank, while mudarabah had a negative and significant influence on profitability of sharia bank. Sub-branch offices also had a negative but insignificant effect on the profitability of sharia banks. This result indicated that income on management became the most dominant income in generating profit for sharia banking. However, the management of funds could not work if they were not supported by Islamic banking channeling tools.

Keywords: Sharia Bank, Profitability, Fund Distribution, Networking

JEL Classification: P430, G21, G170, G240

DOI:

Introduction

The banking sector as an agent of economic development in Indonesia is required to provide banking services for the people of Indonesia. The main functions of banking is as a mediator between the state and the community and to organize the distribution of money in a country. Therefore, banks open network more rapidly and widely by utilizing electronic services, such as Automatic Teller Machine (ATM), Electronic Data Capture (EDC), Conceptual Data Model (CDM), internet banking, and mobile banking, to support financial services. The government has the regulatory agencies for financial services, Bank Indonesia and the Financial Services Authority (OJK).

Islamic commercial bank is a financial institution that serves to facilitate the economic mechanisms in the real sector through business activities (investment, buying and selling, and so on) based on Islamic principles. Sharia principles are based on Islamic law agreement between the bank and other parties to deposit funds and/or to finance business activities in accordance with the values of sharia macroeconomics and microeconomics. The values of the
macroeconomics in question are fairness, maslahah, the system of zakat, freedom from interest (riba), freedom from speculative and non–productive activities like gambling (maysir), freedom from things that are unclear and dubious (gharar), freedom from things that are broken or invalid (false), and the use of money as a medium of exchange.

The services offered by Islamic banks are packaged in the products of Islamic banks, one of which is a murabaha financing. Murabaha is a buy and sell transaction in which the bank acts as the seller and the customer as a buyer, determination of the selling price is the purchase price of the supplier which is added to the profit (margin), in accordance with the agreement between the bank and its customers. Besides murabaha, there are also mudharabah financing and musyarakah financing. Mudharabah is a partnership contract between a bank, as the owner of the funds (shahibul maal), and customers, as mudharib who have the expertise or skills to manage a productive and lawful business. The profits from the use of these funds are shared by the agreement of customers. Mudharabah is used by banks to facilitate compliance with the capital requirement for customers to conduct business or project by way of capital investment for the related business or project. Meanwhile, musharaka is an agreement between two or more parties to finance a business and the profits are shared according to the agreement, but losses are divided by capital respectively.

The low distribution of profit sharing financing or the domination non-profit-sharing financing in the financing portfolio of Islamic banks proved to be a global phenomenon, not only happening in the Islamic banking in Indonesia. This phenomenon occurs not only in the new Islamic banks, but also in well-established Islamic banks.

Chapra (2007) in previous research stated that stages toward improvements have been visible. For example, according to data from the International Association of Islamic Banks or IAIB 1996, the proportion of murabaha which previously reached 90% of the total funding has dropped to 40.3%. Meanwhile, financing profit and musharaka have risen to 7.2% and 12.7%. However, the use of financing in Islamic banking revenue share is still very marginal, that figure is still below 20%. The problem of financing for the use of the results is still very low. This is a not simple problem and it has multi-dimensional facet. In addition to funding, the existing problems in Islamic banks now is profitability. Due to the very strict rules in selecting the appropriate lawful sharia investment and low capital owned compared to conventional banks, Islamic banking profit is less optimal. Here are the conditions of ROA in Islamic banks for the period 2006-2012.

![Figure 1. Average Rating ROA of Islamic Banks 2008-2014](source: Bank Indonesia, 2016)

It can be seen in the above Figure 1 that the ROA in Islamic Banks in 2009 increased, and in 2010-2011 decreased. In the year 2012 it increased again, and in 2013 fell back. Finally in
2014, the ROA of Islamic banks experienced significant progress. ROA of Islamic banks has increased and decreased each year. It is because the FSA rules that require banks to increase their capital reserves and sharia banks are difficult to generate a good profit. It is incompatible with the concept of profitability which states that the factor affecting the profitability of a bank is financing provided by a bank. If levels of financing are high, the profitability will increase, but in reality, when the profitability is relatively stable, the financings of murabaha and mudaraba tend to decline, while the financing of musharaka tends to increase and decrease.

Table 1. The Development of Islamic Banking in Indonesia

<table>
<thead>
<tr>
<th>Indication</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>IB</td>
<td>1</td>
</tr>
<tr>
<td>SBU</td>
<td>-</td>
</tr>
<tr>
<td>RBS</td>
<td>76</td>
</tr>
</tbody>
</table>

Source: Bank Indonesia, 2016

Table 1 shows the development of Islamic banking based on the annual report of BI. In terms of quantity, the achievement of Islamic banking progressed significantly and the number of banks continued to increase. If in 1998 there was only one Islamic Bank (IB) and 76 Rural Bank Sharia (RBS), then in December 2014, the number of IB had reached 11 units and Sharia Business Unit had reached (SBU) 35 units. In addition, the number of RBS reached 148 units in the same period.

Innovation in technology brings great impacts on the banking sector and creates a new way for customer interaction with the banks. The development of electronic tools changes the habits of financial services and makes customers use tools such as ATM, CDM, EDC, Internet Banking, and Mobile Banking (Azeem, 2014). These electronic tools can provide an alternative to accelerate the bank’s financial customer services extensively (Yu, 2003). Due to the massive population growth every year, Indonesia becomes the 4th most populous country in the world. According to the World Bank survey, only 36% or less than 50% of the population of Indonesia had an account at formal institutions (bank) in 2014. This reality makes the banking sector to spread its financial services across the remote area and the aim is to dig the enormous potential of 64% of the total population of Indonesia to immediately use banking services.

Based on the previous explanation where Islamic finance, which consists of murabaha, mudaraba, and musyaraka as well as a conventional network consisting of branch offices, sub-branches and cash offices, A number of ATMs, is expected to affect the ROA, this study tried to see the impact on the profitability of Islamic banks in Indonesia. This study focused on the internal conditions of Islamic bank in Indonesia. The advantages of this study are the use of cost, conventional network, and the number of ATM as factors that can directly affect the ROA of banks.

The Influence of Murabahah on ROA

Financing with the principles of buy or sell in the Islamic bank is done through contracts of murabaha, salam, and istishna. Murabaha contract is the most popular product in the Islamic banking industry. This is due to several reasons, among others, the murabaha is a short-term mechanism investments and quite easy compared to the system profit and loss sharing (PLS). A mark-up in the murabaha ensures that the bank can earn profits comparable with the profits of
conventional banks based on interest. Murabaha dismisses income uncertainties from businesses with PLS system, and murabaha does not allow Islamic banks to interfere in business management since the bank is not a partner but creditor of customers.

Management of buy or sell financing which becomes the largest constituent assets in the Islamic banking will generate revenue in the form of margin or mark-ups. Obtaining mark-up income will affect the amount of Islamic banks income and finally influence the increase in profitability reflected by ROA. This finding is corresponding to research conducted by Fahrul (2012), Oktriani (2011), Rahman and Rochmanika (2012) which stated that murabaha financing influences ROA. The hypothesis of this study is:

H1 : Murabahah has positive effect on ROA.

The Influence of Musharaka on ROA

Musharaka transactions are based on the desire of the related working parties to increase the value of their assets together and all business forms that involve two or more parties in which they jointly integrate all forms of both tangible and intangible resources.

In musharaka financing, all capitals are put together to be a capital project of musharaka and managed together. Each of the capital owners is entitled to participate in making business policies which are run by the project implementers. Costs incurred in implementing the project and duration of the project must be shared. Profits are shared according to the portion agreement while losses are divided in proportion to the capital contribution and the bank gets its revenue from those profits. Earned income will affect the amount of the profits of the banks. The amount of the profits of Islamic banks will be able to affect the profitability achieved. This statement is consistent to previous research conducted by Fahrul (2012), Oktriani (2011), Rahman and Rochmanika (2012) which stated that musyarakah influenced return on assets. Then the hypothesis in this study is:

H2 : Musyarakah financing has positive effect on ROA.

The Influence of Financing Mudharabah on ROA

Mudharabah financing is one of the constituent components of assets in Islamic banking. Karim (2011) stated that mudharabah is a form of cooperation between two or more parties in which the owners of capital (sahibal-maal) entrust the amount of capital to the manager (mudharib) with a profit-sharing agreement. This cooperation combines the 100% cash capital contribution of the sahib al-maal and expertise of mudharib. Results of the management of capital financing can be taken into account by the calculation of project revenue (revenue sharing) and by the calculation of the benefits of the project (profit loss). Project revenue and profit will affect the profits obtained by the bank.

The amount of the profits of Islamic banks will be able to affect profitability. The higher mudharabah financing will result in higher profitability of Islamic banks. This statement matched the research conducted by Fahrul (2012), Oktriani (2011), Rahman, and Ridha Rochmanika (2012), which stated that mudharabah financing influences return on assets. Then the hypothesis of this study is:

H3 : Mudharabah has positive effect on ROA.
**The Influence of Conventional Network on ROA**

Aryanto (2010) stated that variable of number of bank branches has positive effect and impact on revenue. The number of branch offices is a measure of the success of Islamic commercial banking, meaning that if Islamic banks have a lot of branches, more number of people will deposit their funds to Islamic banks. The relationship direction is positive, meaning that the more the number of branches of Islamic banks is, the bigger the opportunity of the people to save becomes, and vice versa, if the number of branches of Islamic banks is small then public will be reluctant to deposit their funds to the Islamic banks because of limited accessibilities. This is suitable to the previous research conducted by Meihami, et al. (2013), then the hypotheses in this study are:

- **H4**: The branch office has a positive impact on ROA
- **H5**: Office branches have positive impact on ROA
- **H6**: Cash office has positive impact on ROA

**The Influences of ATM on ROA**

ATM is one of the bank's products and services, used by most people in Indonesia and even in all parts of the world. With the rapid advancement of technology, competition between banks will increase. ATM, as one of the services of the bank, provides substantial income in addition to credit, savings, or other savings. Process of ATM transactions can affect the increase in income or basic income of the linked bank. Banks earn income from inter-bank ATM transaction, called operational expenses.

Operating expenses are fees charged by Bank as a commission for each linked ATM transaction. Banks earn income not only from customers’ credit, but also from electronic services, such as credit cards, debit cards, and ATM, that rely on information technology. Function of ATM is not only as a cash withdrawal and account transfer but also as various bill payments, for example, credit card payment, internet access subscriptions, mobile phone or beeper (pager) bill payment, and electricity bill payment, by using ATM cards through ATM network. All transactions are subject to automatic deductions by bank operations as an income basis for the issuing bank or bank issuer (Idrus, 2004). The reduction of interest is a revenue to the bank. This is stated in the research conducted by Meihami, et al (2013), while the hypothesis based on explanation above is as follows:

- **H7**: ATM has positive effect on ROA

**Methods**

In this study, the authors used quantitative data form of Annual Data Report from 2010 to 2014 where Islamic finance can be seen in the Balance Sheet of Company at the end of the annual report. Meanwhile, the number of Conventional Network is contained in the Annual Report in the network section, while the total ATMs can be found in the company's Annual Report on the E-Banking section. In this study, data collection techniques were by recording the object of study, namely, Islamic banks listed on the Indonesian Stock Exchange from 2010 to 2014 using Corporate Publishing Report. The authors used SPSS to process the data.

Regression analysis was used to assess the value of the variable Y based on the value of the variables X and to estimate change of variables Y for each unit change in the variable X. The shape of multiple regression equations with free seven variables is as follows:
Y = a + β1X1 + β2X2 + β3X3 + β4X4 + β5X5 + β6X6 + β7X7 + e

where:
Y = Return on Assets
X1= murabaha
X2= musyarakah
X3= mudharabah
X4= branches
X5= branch offices
X6= cash office
X7= Automatic Teller Machine (ATM)
e = Error

The samples of this research were six public Islamic banks listed on the Indonesian Stock Exchange (BEI) and their Annual Reports of the companies during the period 2010 to 2014. The sample criteria was a company belonging to the public Islamic banks company for consecutive periods 2010 to 2014, listed on the Indonesia Stock Exchange, and published Annual Report for the period that ended on December 31, 2014 and has been audited and in rupiah currency. Data obtained from Bank Indonesia was in a form of financial statements of Public Islamic Bank in Indonesia from 2010 to 2014 as many as 6 reports within five years. The financial statements are required in form of balance sheet and income statement, then it will be taken in accordance with research data.

Results and Discussions

The results of calculations using multiple linear regression stated that coefficient of determination seen at numbers on Adjusted R Square was 0.518. This showed that the percentage contribution of independent variables, namely, murabaha financing, musharaka, mudaraba, branches, sub-branches, cash offices, and ATMs, could contribute effect 51.8% on the variable which depended on the return on assets, and the remaining 48.2 % was influenced by other variables and was not included in this research model.

Table 2. Results of Multiple Regression Analysis

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized Coefficients</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>constants</td>
<td>1.748</td>
<td>3.871</td>
</tr>
<tr>
<td>murabaha X1</td>
<td>0.006</td>
<td>0.011</td>
</tr>
<tr>
<td>musyarakah X2</td>
<td>0.029</td>
<td>0.052</td>
</tr>
<tr>
<td>mudharabah X3</td>
<td>-0.264</td>
<td>0.173</td>
</tr>
<tr>
<td>branches X4</td>
<td>0.006</td>
<td>0.012</td>
</tr>
<tr>
<td>branch offices X5</td>
<td>-0.002</td>
<td>0.002</td>
</tr>
<tr>
<td>cash office X6</td>
<td>0.015</td>
<td>0.006</td>
</tr>
<tr>
<td>ATM_X7</td>
<td>0.001</td>
<td>0.001</td>
</tr>
</tbody>
</table>
From the multiple regression equation above, it could be explained as follows:

1. The regression coefficient of murabaha financing variable was 0.006, meaning that if variable of murabaha increased to one million, the return on assets would increase 0.6%, with assumption that other independent variables remain constant.
2. The regression coefficient of musharaka variable was 0.029, meaning that if variable of musharaka increased to one million, the return on assets would increase 2.9%, assuming that other independent variables remain constant.
3. The regression coefficient of mudharabah variable was -0.264, meaning that if variable of mudharabah rose to one million, the return on assets would decrease 2.64%, assuming that other independent variables remain constant.
4. The regression coefficient of variable of branch offices was 0.006, meaning that if variable of branches increased one unit, then the return on assets would increase 0.6%, assuming that other independent variables remain constant.
5. The regression coefficient of variable of branch offices was -0.002, meaning that if variable of sub-branches increased one unit, then the return on assets would decrease by 0.2%, assuming that other independent variables remain constant.
6. The regression coefficient of cash office variable was 0.015, meaning that if variable of cash office increased one unit, then the return on assets would increase 1.5%, assuming that other independent variables remain constant.
7. The regression coefficient of ATM variable was 0.001, meaning that if variable of ATMs increased one unit, then the return on assets would increase 0.1%, assuming that other independent variables remain constant.

The Hypothesis Analysis with F-test

Table 3 contains values that were used for Test F. According to the table above, it was known that the value of F-Sig. was 0.001, meaning that the p-value < α or 0.001 < 0.05 so that decisions that were made in Ho were rejected and in Ha were accepted. This showed that simultaneously, there were positive effects of murabaha financing, musharaka, mudaraba, branches, sub-branches, cash offices, and ATMs on ROA.

<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>Regression</td>
<td>20.474</td>
<td>7</td>
<td>2.925</td>
<td>5.449,001b</td>
<td></td>
</tr>
<tr>
<td>Residual</td>
<td>11.809</td>
<td>22</td>
<td>537</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>32.283</td>
<td>29</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: ROA_Y
b. Predictors: (Constant), ATM_X7, Mudharabah_X3, Murabahah_X1, branch offices_X5, cash office_X6, Musyarakah_X2, branches_X4

Meanwhile, if the determination of decisions was by comparing F count with Ftable, in the table was obtained Fcount equal to 5.449, using a confidence level 95%, α = 5%, df 1 or 7-1 = 6 and df 7 or 30 - 7 - 1 = 22, then the result obtained for the Ftable was 2.464. F count > Ftable (5.449 > 2.464) and therefore, Ho was rejected and Ha was accepted, meaning that murabaha financing, musharaka, mudaraba, branches, sub-branches, cash offices, and ATMs had significant effect on ROA simultaneously.
Based on the results of the F test, the concurrent or simultaneous effects of all independent variables (murabaha, musharaka, mudaraba, branches, sub-branches, cash offices and ATMs) on the return on assets showed positive results. This was shown by the value of $F_{\text{count}} > F_{\text{table}}$ which equalled to 5.449 > 2.464 with 0.000 significance level (less than 0.05).

Meanwhile, from the calculation of the coefficient of determination ($R^2$), it could be concluded that the independent variables in this study had the value of Adjusted $R^2$ Square 0.518 or 51.8%. This showed that the variables of murabaha, musharaka, mudaraba, branches, sub-branches, cash offices, and ATMs could affect the return on assets with contribution percentage of 51.8% while the rest of 42.2% were influenced by other factors which were not included in this study.

### Table 4. Analysis Results of t-Test on Regression Coefficient

<table>
<thead>
<tr>
<th></th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constants</td>
<td>0.452</td>
<td>0.656</td>
</tr>
<tr>
<td>murabaha $X_1$</td>
<td>3.015</td>
<td>0.008</td>
</tr>
<tr>
<td>musyarakah $X_2$</td>
<td>3.056</td>
<td>0.006</td>
</tr>
<tr>
<td>mudharabah $X_3$</td>
<td>-2.526</td>
<td>0.001</td>
</tr>
<tr>
<td>branches $X_4$</td>
<td>4.515</td>
<td>0.002</td>
</tr>
<tr>
<td>branch offices $X_5$</td>
<td>-0.774</td>
<td>0.447</td>
</tr>
<tr>
<td>cash office $X_6$</td>
<td>2.430</td>
<td>0.024</td>
</tr>
<tr>
<td>ATM $X_7$</td>
<td>3.535</td>
<td>0.009</td>
</tr>
</tbody>
</table>

Results of testing on the hypothesis 1 showed that murabaha variable had a partial positive effect on ROA. This financing had a definite ratio level for profit since it had been calculated at the time of the transaction that led to the low risk of profit loss so that it would affect the upcoming customer’s payment. These conditions affected the profitability achieved by Islamic banks. Murabaha financing is financing that uses the principle of buying and selling goods where the bank buys goods from suppliers and then resells it to customers. The selling price of goods is the acquisition cost plus a mark-up or profit which has been agreed by the bank and its customers as buyers. From the management of murabaha financing, Islamic banks earn income in accordance with the ratio agreed by the customer (Mohammed, 2005).

Income will affect the amount of the bank’s profits. The amount of the profits of Islamic banks will be able to affect the profitability achieved and therefore, murabaha is the most widely used in Islamic banking. Empirical evidence from Wicaksana (2011), Fahrul (2012), Oktriani (2011), Rahman and Ridha Rochmanika (2012) showed that the higher the murabaha financing, which is one type of financing transactions, the higher profitability of Islamic banks are targeted by ROA.

Results of testing on the hypothesis 2 showed that musyarakah variable had a positive effect on ROA. Karim (2006) stated that musyarakah are all forms of business that involve two or more parties in which they together combine all forms of both tangible and intangible resources. Profits and losses are shared in proportion to the preset. Through financing, Islamic banks will earn revenue from the results of delivered profit sharing.

The practice of musharaka actually is not much different from the practice of mudharabah financing in Islamic banking. The difference is to whom such financing is directed. Mudharabah financing is distributed to the cooperative, BMT (Baitul Maal wa Tamwil), as well as to finance companies. Meanwhile, musharaka financing is distributed to working capital, such as trade or service. In practice of Islamic Bank, distribution of funds to working capital, such as trade and
services, is very much used, compared to the distribution of funding to cooperatives or BMT. Musharaka is more commonly used than the mudharabah, so musyarakah has significant effect on ROA. Rahman and Rochmanika (2011) stated that profit-sharing financing has positive significant effect on profitability proxied through ROA on sharia banks in Indonesia.

Results of testing on the hypothesis showed that the mudaraba had negative and significant influence on ROA. Mudaraba is a partnership contract between two parties where the first party (Shahibul Maal) or in this case, Islamic Bank, provides 100% capital while the other party is a manager and the profit is divided by the agreements set forth in the contract. If there are losses, the owners of capital will take in charge, as long as the loss was not due to negligence of the manager. However, if the manager has contributed to the loss, manager shall bear it. (Antonio 2001). Revenue or profit sharing ratio of mudharabah financing is uncertain because the profit sharing ratio determined by Islamic banks is in accordance with the turnover of the business acquired. Therefore, the calculation of income is constantly changing in accordance with the achievement of the business turnover and thus, it makes mudharabah financing have significant negative effect on ROA. It is the same as the finding by Rahman and Rochmanika (2011) in which the mudharabah has negative effect on ROA.

Results of testing on the hypothesis 4 showed partial variable of branches which had a positive effect on ROA. Hypothesis 5 testing results found that the variable of branch offices partially showed a negative but insignificant effect on the ROA. Meanwhile, the results of testing on hypothesis 6 showed that partial variable of cash office had a positive effect on return on assets. The regression results showed that the number of branches affected the ROA. It showed that more and more number of branches would increase the profitability of Islamic Banks. When the Islamic Banks expand branch network, the customer will be easier to invest or finance so it can be said that increasing the number of branch offices provides an important role for Islamic banks to improve profitability. This study is in line with research of Rachman, et al. (2013) which stated that the conventional network affects the return on assets.

The results of testing on the hypothesis 7 showed that partial variable of ATM had a positive effect on ROA. In order to maintain the ability to make a profit, banks continued to increase non-interest operating income called fee-based income. In this way, banks increase revenue by optimizing the function of ATM transactions to increase fee-based. This shows that the number of ATMs is very influential on the increase of non-interest income of banks with very little risk. This also indicates that although the bank’s main source of revenue comes from bank ratios derived from the finance portfolio, the quality of financing provided must be well considered, or risk of such financing should be minimized. The better the quality is, the better the level of bank interest income becomes and vice versa because funding depends on the quality of those financing.

Conclusions

Overall test results stated that only mudaraba had negative and significant impact on the ROA. Profit sharing ratio of mudharabah financing is uncertain due to the profit sharing ratio determined by Islamic banks in accordance with the turnover of the business acquired. Therefore, the calculation of income is constantly changing in accordance with the achievement of the business turnover, and it gives significant negative influence on ROA. Meanwhile, the existence of branches was dominant and very important variable to influence ROA. The more number of branches owned will increase the profitability of Islamic Banks. By seeing this result, the government is expected to make more regulations to the course of the Islamic banking
system by completely separating conventional and Islamic banking systems, so that Islamic banking applies pure sharia. Islamic banks also have started to invest electronic networks by utilizing information technology.

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