Pricing the Equity-Based Financing of Mudharabah: Insights into its Drivers

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Abstract
This study investigates the factors that influence the pricing of mudharabah financing as offered by Islamic Banks in Indonesia. Specifically, it examines whether the operational cost to operating income (BOPO), risk factor and spread significantly influences the pricing of mudharabah financing. This study uses a quantitative method based on secondary data derived from the Islamic banks’ financial statements for the period of 2014-2018. Purposive sampling is utilized, with the total 9 Islamic Commercial Banks being the samples that meet the criteria, resulting in 45 units of analysis for five years observation. This study uncovers that all of the three independent variables affect the dependent variable simultaneously. From the partial results, only two variables that affect the pricing of mudharabah financing, i.e. risk factors and spread. Meanwhile BOPO was found to have no association with the pricing of mudharabah financing. This study implies that pricing of mudharabah financing may be largely dependent on the risk factors and spread rather than the consideration on the operational cost to the operational income.

Keywords: Operating Expenses to Operating Income (BOPO), Risk Factor, Spread, Mudharabah Financing, Islamic banking.

INTRODUCTION
Equity-based financing through profit-sharing mechanisms as inherent in Islamic financing products like mudharabah has been believed to be the genuine financing alternative in Islamic economics as compared to the forbidden interest-based financing products (El-din, 2008; Khan & Mirakhor, 1987; Usmani, 1998). In Islamic Finance, the alternative financing
in avoiding conventional debt financing based on interest rates (usury), *mudharabah* is present as an equity financing instrument (Afzal & Hassan, 2018). *Mudharabah* financing, as the basis principle in sharia for profit-sharing mechanism (Yulianto & Solikhah, 2016), has been often discussed within the *fiqh* literature (Febianto & Kasri, 2007). It is a financing contract between Islamic banks as fund owner (*shahibul maal*) and customers as fund manager (*mudharib*) to carry out business activities, where Islamic banks provide 100% capital and customers run their business (Bacha, 1995; Ismail, 2011). The profit-sharing ratio of financing is mostly determined by referring to the profit margins and the estimated level of profit of the business or project being financed (Karim, 2010). Therefore, the higher the profit, the higher the ratio for the bank’s profit-sharing or obtained by the bank.

*Mudharabah* financing has been widely implemented in Islamic banking, yet its proportion is still relatively low compared to other financing products such as musharaka and murabahah. This phenomenon is mainly caused by the fact that the capital is one hundred percent financed by the bank; hence it has a higher risk level of default (bad credit) than other contracts (Ismail, 2011). Therefore not many banks are willing to take risks that result in decreased income levels (Astivani, 2018). Given its features, *mudharabah* financing is claimed to have more agency problems than conventional debt or equity financing (Bacha, 1995; Dar & Presley, 2001; Rosly & Mohd. Zaini, 2008; Warde, Martens, & Olsen, 1999). Thus, in terms of agency costs, *mudharabah* would have the highest costs; hence, it is not surprising that *mudharabah* as a financing form for Islamic banks has been minimal. For instance, in Indonesia, *mudharabah* constitutes a tiny proportion compared to other financing products, as depicted in Table 1. The proportion of financing and the equivalent rate of Islamic Commercial Banks in Indonesia can be seen in Table 1 that shows the equivalent (return/profit sharing) in Islamic bank financing has decreased every year. The use of *mudharabah* contracts notably reduced in 2018 because the yield (equivalent rate) also declined. The cause for this derivation is the loss of the business or project; thus, the equivalent rate becomes lower than the proportion of its financing. Hence, the rate of return given is under the fluctuation of business profits or project financing.
Table 1. The proportion of equivalent rate financing for Islamic commercial banks 2016 – 2018 (Billion IDR)

<table>
<thead>
<tr>
<th>Contract</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Proportion</td>
<td>Eq-Rate (%)</td>
<td>Proportion</td>
</tr>
<tr>
<td>Mudharabah</td>
<td>7,577</td>
<td>12.51</td>
<td>6,584</td>
</tr>
<tr>
<td>Musyarakah</td>
<td>54,052</td>
<td>11.75</td>
<td>60,465</td>
</tr>
<tr>
<td>Murabahah</td>
<td>110,063</td>
<td>13.23</td>
<td>114,458</td>
</tr>
<tr>
<td>Salam</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Istishna</td>
<td>25</td>
<td>13.50</td>
<td>18</td>
</tr>
<tr>
<td>Ijarah</td>
<td>1,882</td>
<td>12.74</td>
<td>2,788</td>
</tr>
<tr>
<td>Qardh</td>
<td>3,883</td>
<td>12.35</td>
<td>5,476</td>
</tr>
</tbody>
</table>

Source: processed data (2019)

Some issues surrounding the mudharabah financing have been the focus of previous studies. One of the vital subjects is the pricing of mudharabah financing. There have been critics that current Islamic banking has been overly emphasizing contract mechanisms and Islamic certifications rather than on more important aspects like efficiency and fair pricing (El-Gamal, 2008). Specifically, in pricing for mudharabah financing, the previous studies generally grouped into two main discourses. First, the research focuses on the philosophy and mechanism of pricing and determination of profit-sharing ratio. Studies in this regard can be traced to the works of among other previous research (Ali & Siddique, 2015; Ghauri, 2015; Ghazali, 1994; Hasan, 1985; Kusuma, Adji, Santosa, Mursinto, & Ryandono, 2018; Omar, Noor, & Meera, 2010; Usmani, 1998a). Another stream is research, which examines factors influencing the pricing of mudharabah financing. The previous study examined this second context, such as (Astivani, 2018; Dirnaeni & Handrijaningsih, 2016). Our study is focusing on the latter dimension and aiming to fill the gap in the existing literature. Despite verifying the inconsistent findings from previous research on factors influencing the pricing of mudharabah, this study also examines the different set of potential determinants of mudharabah pricing in the attempt to identify the causal effect of the studied variables. Based on the phenomena and research gaps described above, it is interesting to determine whether the factors of (BOPO), risk factor, and spread influence the pricing of mudharabah financing as implemented by Islamic banks in Indonesia.
The remainder of this paper is structured as follows. The next section briefly reviews the literature review of mudharabah financing and factors influencing the pricing of mudharabah financing and also the hypotheses development. Subsequently, the research method will be explained. The section afterwards presents and discusses the research findings followed by a conclusion.

LITERATURE REVIEW

Islamic jurists consider Mudharabah to be one of the most superior previous and current models of Islamic finance (Shaikh, 2011). Mudharabah financing is a transaction of fund investment from the fund owner (shahibul maal) to the fund manager (mudharib) to carry out certain business activities that are under the Islamic principles. As the main fund resource of sharia banks, according to Antonio (2001), the profit-sharing obtained in the mudharabah contract depends on the bank’s income and the profit sharing ratio between the customer and the bank, and it shared between the two parties based on a previously agreed ratio (Wangsawidjaja, 2012). Profit-sharing in Islamic banks is not stated in nominal terms but in percentage terms for both parties. For example, 50:50, 60:40, 70:30, and so on. As an intermediary financial institution, Islamic banks will profit from the funds placed in their partners (nisbah). The profit-sharing from this ratio will later be distributed to savers.

Pricing is integral in any product offered by banks, including mudharabah financing. Price is an essential aspect of the marketing mix. Pricing will significantly impact the products offered, and pricing errors will have fatal consequences for bank operations. The price is interest plus administrative costs, fees and commissions, shipping costs, collection fees, rental fees, fees, and other conventional banks’ expenses. Meanwhile, Islamic banks’ price is the cost of interest replaced by profit sharing (Kasmir, 2010). Pricing management is a management activity to determine the level of returns on the products offered by the bank, both on the asset side and the liability side. For the main objective of pricing, management is to support the bank’s Asset and Liability Management (ALMA) strategy and tactics to achieve other operational objectives and the bank’s revenue goals (Astivani, 2018). In this research, financing pricing should use a profit-sharing ratio, but the profit-sharing ratio will be proxied using the data equivalent rate. The proxy ratio’s reason to be the equivalent rate is that there are many types of profit-sharing in Islamic banks, making it difficult to find data and process
the data. Thus, in this study, financing pricing uses the data equivalent rate in Islamic Commercial Banks.

Corresponding to the research conducted by Nofianti, Badina, & Erlangga (2015) one of the factors that can affect the pricing of mudharabah financing is Operating Costs to Operating Income (BOPO), which is the ratio used to measure the comparison of operating costs or intermediation costs to operating income earned by the bank. The smaller the ratio, the better the condition of the bank (Anggrainy, 2010). The BOPO ratio is the ratio between operating costs and operating income. Bank Indonesia has stipulated that the BOPO ratio is below 90%. If the BOPO ratio exceeds 90% and closes to 100%, it is categorized as inefficient in carrying out its operational activities. In banks, the level of efficiency in carrying out its operations affects the bank’s level of income. If its operational activities are carried out efficiently, the income generated by the bank will increase so that it will affect the price for the results of financing. Thus, the first hypothesis is:

\[ H_1: \text{There is an influence of Operating Costs to Operating Income (BOPO) on the pricing of mudharabah financing.} \]

Furthermore, Astivani (2018) illustrated that another factor that can affect mudharabah financing pricing is the risk factor. Apart from the benefits of the mudharabah, there are also several types of risks involved in its implementation, such as the market risk, liquidity risk, credit risk and operational risk (Afzal & Hassan, 2018). According to Taswan (2010), one type of the risk factor, the bad credit risk, is a reserve against non-performing loans because every credit given must contain a risk of not being paid off. In determining the price for the financing results delivered to customers, the risk factor component needs to be taken into account because this risk can occur either intentionally or accidentally. Hence, banks take precautionary measurement against the possibility of credit risk in the future. Thus, the risk factor has a positive influence on determining the pricing of mudharabah financing, so the second hypothesis is:

\[ H_2: \text{There is an influence of the risk factor on the pricing of mudharabah financing pricing.} \]
The next factor that can affect the pricing of mudharabah financing is spread. According to Pramono (2013) the spread can be said to be the primary income of a bank that determines the amount of net income, where the higher the spread generated by the bank, the higher the level of profit earned. The determination of the level of spreads depends on how the bank implements its strategy as well as its target market and banking risk (Endika, 2017). For the Islamic bank, the higher level of spreads is also wanted, because Islamic banks are also one of the profit-oriented Islamic business entities. So, Islamic banks will develop strategies to produce high spreads to get high profits or profits. If Islamic banks’ profits are high, the mudharabah financing that Islamic banks can distribute increases, and vice versa (Pramono, 2013). Thus, it is expected that the spread will play a positive role in obtaining high profits or profits to affect the price for the financing results. Therefore, the last proposed hypothesis is:

H₃: There is an influence of spread on the pricing of mudharabah financing pricing.

RESEARCH METHOD

This study uses pooled data with all of 14 Islamic Banks in Indonesia as the population. By using purposive sampling method, the selected sample must meet criteria such as the Islamic commercial banks that have been operating and registered under the Financial Services Authority (OJK) during the research period, Islamic commercial banks that have publish annual reports during the research period, and the last, for the Islamic commercial banks that have reliable data needed by this research. From these criteria, the sample came up with the 9 Islamic Banks in Indonesia. With the five years of observation (2014 to 2018), the total observation data for this study are 45 as the secondary data, where the published financial reports of Islamic Commercial Banks were collected on the official websites of each bank for the period of 2014-2018.

For the variable, mudharabah financing is the dependent variable using the ratio to the equivalent rate for the results of the mudharabah contract. The equivalent profit-sharing rate for the mudharabah contract is the average return rate on mudharabah financing for Islamic banks at a particular time (Andraeney, 2011). The profit-sharing rate is measured using a ratio scale based on the comparison between the mudharabah profit sharing income
received by Islamic banks with the total mudharabah financing collected by the Islamic bank. Then, the approach is:

\[
Equivalent \ rate = \frac{Mudharabah \ profit \ - \ sharing \ income}{Total \ mudharabah \ financing} \times 100\% 
\]

For the dependent variables, the first is Operational Costs on Operational Income (BOPO). The lower the BOPO, the more efficient the bank is in reducing its operational costs, with cost efficiency, the greater the profits that the bank will get. According to (Ponco, 2008), this ratio aims to measure the ability of operating income to cover operating costs. The increasing ratio reflects a bank’s lack of ability to reduce operating costs and increase its operating income which can cause losses because banks are less efficient in managing their business. Following the form letter by Central Bank of Indonesia No.13/24/DPNP, the formula in calculating the BOPO is as follows:

\[
BOPO = \frac{Operating \ costs}{Operating \ income} \times 100\% 
\]

While for the second independent variable, risk factor, according to (Taswan, 2010), risk factors (risk reserves for bad credit) reserves against non-performing loans are given because each credit given must carry the risk of repayment. The formula for calculating this variable is as follows:

\[
Risk \ Factor = \frac{Cost \ of \ provision \ for \ funding \ elimination \ reserve}{Total \ financing \ provided} \times 100\% 
\]

The last independent variable is spread, also known as net-margin, defined as the bank’s primary income and will determine the amount of net bank income. The spread varies depending on the volume of credit to be distributed. The large volume of credit extended by banks will affect the margin between the loan interest rate (cost of funds) and the lending rate (Dendawijaya, 2001). The formula is:

\[
Spread = \frac{Profit \ sharing \ received}{Profit \ Sharing \ Distributed} 
\]
Moreover, to test the influence of independent variables on the incidence of the dependent variable, multiple linear regression analysis methods are used in this study with the empirical model as follows:

\[ Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon \]

where:
- \( \alpha \) = a constant;
- \( \beta_1, \beta_2, \beta_3 \) = regression coefficient;
- \( X_1 \) = BOPO;
- \( X_2 \) = risk factor;
- \( X_3 \) = spread; and
- \( \varepsilon \) = standard error.

RESULTS

The first step for the result is the descriptive statistical findings. Table 2 shows that the profit-sharing rate variable (mudharabah) has a minimum value of 4.30 with a maximum amount of 22.90, with mean 13.305, and standard deviation of 3.565, respectively. The BOPO variable has a minimum value of 82.58, and a maximum value of 143.31, with a standard deviation of 12.652. The risk factor variable has a minimum amount of 0.32, a maximum value of 9.66, and standard deviation of 2.178. The spread variable has a minimum value of 1.28, a maximum value of 3.57, and a standard deviation of 0.623.

<table>
<thead>
<tr>
<th>Table 2. Descriptive Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Minimum</strong></td>
</tr>
<tr>
<td>Profit-sharing rate</td>
</tr>
<tr>
<td>BOPO</td>
</tr>
<tr>
<td>Risk Factor</td>
</tr>
<tr>
<td>Spread</td>
</tr>
</tbody>
</table>

Classical Assumption Test Results

There were four tests used in the classical assumption test in this study: normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test. Using the Kolmogorov-Smirnov test, the normality test has asymptotic significance higher than the significant level of 5%, which is 0.997. It can be concluded that the sample data in the study were usually
distributed. For the multicollinearity test, all of the independent variables have a higher tolerance value than 0.10 and a VIF value of less than 10. So, it implies that there is no multicollinearity between the independent variables in the regression model. For the heteroscedasticity test, the regression model can be said to be free from heteroscedasticity with the significance value for each variable > 0.05. The result shows that BOPO was 0.399, risk factor is 0.812, and spread is 0.476. The last for autocorrelation test with the dU table and dL table values are 1.7200 and 1.3357, and DW value is 2.236, respectively. It can be portrayed that the DW value is greater than the dU table and less than 2.2800 (4 - dU table = 2.2800). It can be concluded that there is no autocorrelation in the data.

**Hypothesis Testing Result**

Table 3 describes the multiple linear regression analysis results for this study. By the result, the equation is obtained as follows:

\[
Y = -3.825 + 0.140X_1 - 0.012X_2 + 0.779X_3 + \varepsilon
\]

According to the regression equation above, the constant value is negative at -3.825. This means that if the variables of BOPO, risk factor, and spread are considered persistent, then the amount of *mudharabah* financing pricing for Islamic commercial banks in Indonesia for the 2014-2018 period will decrease by 3.825. For the BOPO variable, each reduction in BOPO will increase the percentage of *mudharabah* financing pricing at Islamic commercial banks in Indonesia for the 2014-2018 period by 0.012. While Risk Factor with 0.779, this implies that each increase in Risk Factor will increase the percentage of *mudharabah* financing pricing at Islamic commercial banks in Indonesia for the 2014-2018 period by 0.779. The last for the Spread variable is 1.956. This means that each increase in the spread will increase the percentage of *mudharabah* financing pricing at Islamic commercial banks in Indonesia for the 2014-2018 period by 1.956%.

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>-3.825</td>
<td>-0.566</td>
<td>0.575</td>
</tr>
<tr>
<td>BOPO</td>
<td>-0.012</td>
<td>-0.358</td>
<td>0.723</td>
</tr>
<tr>
<td>Risk Factor</td>
<td>0.779</td>
<td>3.879</td>
<td>0.000</td>
</tr>
<tr>
<td>Spread</td>
<td>1.956</td>
<td>2.954</td>
<td>0.005</td>
</tr>
<tr>
<td>F Test</td>
<td></td>
<td>9.028</td>
<td></td>
</tr>
<tr>
<td>R Square (R²)</td>
<td></td>
<td>42.2%</td>
<td></td>
</tr>
</tbody>
</table>
Table 3 also portrayed the result for F Statistical Test (F Test) for the simultaneous significance test and came up with the 9.028 value, which means all of the independent variables (BOPO, Risk Factor, and Spread) simultaneously affect the dependent variable. The coefficient of determination ($R^2$) test used to measure how much the model’s ability to explain the variation in the dependent variable in the table has a value of 42.2%. It shows that independent variables can only describe the pricing of mudharabah financing by 42.2%, while other variables outside the research model explain the remaining 57.8%.

For the t statistical test, this test basically aims to show how far the independent variables influence the dependent variable individually. With the 5% ($0.05$) of the significant level, the results based on Table 3 said that BOPO as the dependent variable with a significance value of 0.723 that greater than 0.05; this shows that BOPO does not affect mudharabah financing pricing (dependent variable). Thus, the first hypothesis ($H_1$) is rejected. While the risk factor has a significance value less than 0.05 ($0.000$). It indicates that the risk factor affects the pricing of mudharabah financing. Hence, the second hypothesis ($H_2$) is accepted. The last independent variable, spread, has a significance value of 0.005 ($< 0.05$). It shows that the spread affects the pricing of mudharabah financing. Therefore, the third hypothesis ($H_3$) is accepted.

**DISCUSSION**

**The Effect of Operating Costs to Operating Income (BOPO) on the Pricing of Mudharabah Financing**

Hypothesis testing results show that Operating Costs to Operating Income (BOPO) has a significance level of 0.723 greater than the significant level of 5% ($0.723 > 0.05$). This explains that BOPO does not affect the pricing of mudharabah financing. Nevertheless, this also could be happening because several Islamic commercial banks in the 2014-2018 period used by this study experienced an increase in the ratio which used to measure the comparison of operating costs or intermediation costs to operating income earned by the banks. This ratio illustrates the level of efficiency of banks in carrying out their operations to generate revenue. It is found that several Islamic commercial banks in the 2014-2018 period were on a predicate scale above 100%, where the efficient bank should has the predicate scale of the ratio and the credit
value of BOPO around 92% and below, and if it is exceeds 100%, the it can be said inefficient. Therefore in this study, it can be concluded that the Islamic banks used are in an unhealthy state.

This finding is in line with the findings of Fariantanto (2014), Umiyati & Syarif (2016), Malik (2017), Sabtatianto & Yusuf (2018) that found BOPO insignificantly affected the mudharabah financing. They further explained that with the inefficient ratio (exceeding 100%), the shabby effect will be raised for the profit sharing rate which will be received by the customer. In another word, if the banks get the lower operational income, then the risk of the Islamic bank has will be borne by the customers, and they will get a small mudharabah profit sharing (Sabtatianto & Yusuf, 2018; Umiyati & Syarif, 2016). While if the bank’s operating costs decrease, the bank’s income will increase. With an increase in bank income, the mudharabah profit-sharing rate received by customers will also incline. According to Umiyati & Syarif (2016) this is not because the banks cannot streamline their costs, but because conventional banks’ interest rates are relatively high in the first years after the 2008 crisis, which is the basis for the consideration for several Islamic banks in maintaining the third party funds by subsidizing a large portion of profit sharing for mudharabah deposit’s customer.

The Influence of Risk Factors on the Pricing of Mudharabah Financing

With the significance level of 0.000 which is less than 0.05 for the hypothesis testing result using t-test, risk factors can be said has the significant effect on the pricing of mudharabah financing. This study’s result is supported by findings of Astivani (2018) which stated that risk factors significantly affect mudharabah profit-sharing pricing. The risk factor (reserve for bad credit risk) is a reserve against non-performing loans because every credit given must contain a risk of not being paid off. This findings indicates that risk factors associated with the mudharabah financing pricing, and the further explained that this happen because the higher the level of bad credit, the higher the profit allowance is allocated to cover these losses. Therefore, the bank must further minimize the risk of bad credit.

On the other hand, the study done by Afzal & Hassan (2018) found the inverse relationship between the risk factor and the mudharabah financing. In their study, it was found that risk factors play a hurdle in preventing the growth of mudharabah financing, although the banking industry has the
highly experts in managing the resource to scrutinize the whole procedure of investment, but still there are chances of failures.

**The Influence of Spread on Mudharabah Financing Pricing**

The hypothesis testing results for spread show a significance level with the value of 0.005 that is less than the significant level of 0.05 (5%). This indicates that the last hypothesis (H₃) is accepted, where spread has an effect on the pricing of mudharabah financing. This finding supports the results of Pramono (2013), Prasasti & Prasetiono (2014) and Krisnanto, Amah, & Novitasari (2019).

Spreads in general can be said to be the primary income of the bank that determines the amount of net income, where the higher the spread generated by the bank, the higher the level of profit they will get (Pramono, 2013). Since Islamic banks are also one of the profit-oriented business entities, the substantial spread is also wanted by the Islamic banks. In order to achieve high profits, the bank’s determination of a strategy to produce high spreads for getting a high profit is essential. Therefore, the benefits obtained will be even more and will have an effect on increasing the provision of profit sharing financing to customers (Krisnanto et al., 2019).

To sum up, this finding clarifies that with the influence of the spread on mudharabah financing, it can be said that an increase in the spread will be followed by an increase in profit sharing financing.

**CONCLUSION**

This research has attempted to look into determinants of pricing of mudharabah financing products offered by Islamic banks in Indonesia from 2014 to 2018. By using the multiple linear regression method, it was found that BOPO, risk factor, and spread together affect the pricing of mudharabah financing pricing. Nevertheless, the partial test indicates that BOPO has no effect on mudharabah financing pricing while risk factors and spread instead affect the pricing of mudharabah financing at the Islamic Commercial Banks in Indonesia for the 2014-2018 period. This study implies that pricing of mudharabah financing may be largely dependent on the risk factors and spread rather than the consideration on the operational cost to the operational income.

There are several limitations in this study that can be considered for future researchers to enrich and derive better results. First, this study was conducted utilizing the samples Islamic Commercial Banks in Indonesia
with the five years observation (2014-2018), which may be relatively limited in terms of number of samples. Second, this research only examined three independent variables, Operational Costs to Operational Income (BOPO), risk factor, and spread. Future research are recommended to add other independent variables that are not included in this study, which might affect the pricing of mudharabah financing. Expanding research period and samples is also recommended by using other Islamic institutions such as Sharia Business Units and Islamic microfinance banks (BPRS) hence more accurate and meaningful findings can be generated.

Reference


Pricing the Equity-Based


