Activity Diversification, Performance, and Profitability in Islamic Banking

Hilmy Baroroh
UIN Sunan Kalijaga Yogyakarta
Email korespondensi: hilmy.baroroh@uin-suka.ac.id

Abstract
Diversification of financing in Islamic banking is a strategy to improve performance. However, can the diversification of financing carried out by Islamic banks increase profitability? And is financing diversification able to reduce financing risks? The study wanted to prove these two theories by using data from the Islamic Banking Report for the 2016-2021 Period using the HHI indicator to diversify financing. Three categories of financing diversification are contract-based, financing-based, and economic sector-based. Profitability in the study was measured using the ROA ratio and the risk of bad debts with the NPF ratio. The result of this study is that the diversification of contract-based financing affects ROA in a negative direction and has a positive effect on NPF. On the other hand, financing diversification based on the use of financing does not affect increasing profitability and has a positive impact on the risk of bad debts. Meanwhile, sector-based financing diversification has a significant effect on increasing profitability and has a significant negative impact on reducing the risk of bad debts in Islamic banks.

Keywords: HHI, Diversification, ROA, NPF

1. INTRODUCTION
Financing diversification activities in Islamic banking are a strategy for corporate risk management. In general, this financing diversification is expected to control risk so that the risk of default can be avoided. It is even mandatory for banks to diversify for the principle of prudence (Christianti, 2011). In addition, maximum banking profitability can be obtained from accuracy in lending. Thus, banks will continuously evaluate financing activities because this is a crucial thing to do regularly (Prastiwi & Anik, 2020a). Islamic banking makes policies in diversifying financing through several channels, diversifying financing based on use, financing based on the contracts used, and financing based on economic sectors where this financing distribution is one of the...
strategies to reduce financing risks in the form of bad debts and as a technique to increase banking profitability (Masruroh, 2018).

Some previous theories have found that managers should consider bank-specific factors related to diversification if Islamic banking reduces potential risks and maximizes profitability (Gafrej & Boujelbène, 2022). However, another theory suggests a different point that lending would be better if it concentrated on several sectors rather than diversifying credit, which can lead to increased credit risk due to the characteristics of the financing sector that are not the same (Simpasa & Pla, 2016), (Rosly & Bakar, 2003).

Table 1. Total Financing of BUS, NPF, dan ROA

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Financing</th>
<th>NPF</th>
<th>ROA</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>202,765,68</td>
<td>3,26</td>
<td>1,28</td>
</tr>
<tr>
<td>2019</td>
<td>225,607,19</td>
<td>3,23</td>
<td>1,73</td>
</tr>
<tr>
<td>2020</td>
<td>246,957,04</td>
<td>3,13</td>
<td>1,40</td>
</tr>
<tr>
<td>2021</td>
<td>256,404,67</td>
<td>2,59</td>
<td>1,55</td>
</tr>
</tbody>
</table>

Source: SPS OJK (Processed)

As in table 1 above, it can be seen that a decrease does not always follow an increase in the amount of financing in default and an increase in profitability. Many factors can cause this. Financing diversification activities can reduce credit risk and cannot be separated from other factors such as banking liquidity, total assets, Good Corporate Governance (GCG) management, and others (Widyatini, 2016). Under certain conditions, this diversification will result in bad debts increasing and profitability decreasing.

Therefore, it refers to the diversification of financing in Islamic banking, and whether it can improve or vice versa, it can reduce bank performance. So this should be studied in more depth related to the phenomenon of financing strategies because poor management will result in bad debts, which, if it occurs continuously, will have an impact on the health of bank operations, therefore efforts are needed to control the credit risk (Mohamed Ali Chatti1, 2011).

2. LITERATURE REVIEW

Financing Diversification in Islamic Banking

Diversification in the banking industry aims to reduce the risk of non-performing financing and reduce liquidity exposure (Chen et al., 2013). In addition, Chen et al., (2013) stated that banks should diversify financing to lower risks, as stated in portfolio theory. In Islamic banking, there are three types of financing diversification, namely based on the type of contract, based on the use of financing and the economic sector. Firstly, diversification based on contracts consisting of profit sharing, receivables, rent or ijarah, and salam systems. The second is based on the use of financing including investment, consumption, and working capital. And third, diversification category based on economic sector, namely , health services and social activities, agriculture, hunting, and forestry, processing industry then mining and quarrying, electricity, gas, and water, construction, wholesale and retail trade, education services, transportation, warehousing, and communication, community services, socio-culture, entertainment, and other individuals, individual services serving households, international bodies and other extra-international bodies, other activities.

Profitability

Profitability is a ratio to comprehensively determines company management's effectiveness, which can be observed from the amount of profit obtained by Islamic banks (Prastiwi & Anik, 2020a). Kasmir (2013) stated that one of the ratios commonly used to measure a company's profitability is ROA (Return On Asset), as well as in research on measuring company performance and profitability using Islamic banking ROA.

ROA is a ratio that shows information about the efficiency of a company's performance because this ratio indicates the average profit obtained against the company's assets. It can be concluded that the greater the ROA, the better the company's performance because the greater the profit (Tan et al., 2017) The greater the ROA obtained by Islamic banks, the better Islamic banking will be in improving its financial performance. The following formula for measuring ROA is:

$$\text{ROA} = \frac{\text{Net Profit}}{\text{Total Asset}} \times 100$$

Financing Risk

The activity of disbursing funds from Islamic banks to parties with deficit funds through financing aims to bring considerable profits to banks. However, this activity does not always bring profit and can be a problem with financing and even bad debts. Bad loans in Islamic banking can be seen from the NPF (Non-Performing Financing) ratio. This ratio is used to measure the ability of banks to overcome the risk of
bad debts by debtors borrowing funds from banks (Aryani et al., 2016). In addition, bad debts are conditions where customers are unable to return their obligations to the bank, either part or all of the funds they have borrowed (Muhammad et al., 2020). The following is the formula of the Islamic banking NPF, as follows:

\[ \text{NPF} = \frac{\text{Non Performing Loans}}{\text{Total Credit}} \times 100 \]

NPF is vital for measuring banking performance (Havizd & Setiawan, 2015). The higher the NPF of Islamic banking, the worse its performance in managing its financing.

Previous research on financing diversification has been carried out, as in the study conducted by Gafrej & Boujelbène (2022) on the diversification and risk of conventional and Islamic banks with several other factors such as macroeconomics, board structure, and banking-specific factors. By looking for the influence between these variables, it was found that capitalization ratio, credit risk, performance, and liquidity risk significantly affected the diversification of Islamic bank investments. However, the diversification of Islamic banks is less sensitive to macroeconomic factors. On the other hand, liquidity, credit risk, and the ratio of capital to total assets significantly influence the diversification of conventional bank investments. In addition, the board of directors' structure has a significant effect on conventional and Islamic banks.

Another study (Prastiw & Anik, 2020) using data from commercial banks in Indonesia in 2015-2018 aims to determine the effect of credit diversification channeled on the economic sector with the risk of default and the performance of Indonesian commercial banks using the multiple linear regression method. The results show that the diversification of credit disbursed to the economic sector affects banks' profitability. As well as diversification of credit spending to the economic sector, it also affects reducing bank credit risk. Kabir et al. (2015) compared credit risk in Islamic and conventional banks based on accounting information with Z-score and NPL ratios. It is known that credit risk in Islamic banking is much lower than credit risk in conventional banks. Furthermore, research conducted by Ammar & Boughrara (2019) suggests that the performance of banks in diversification affects the improvement of banking profitability. In addition, banking stability increased due to the diversification of the banking business. The sample used in this study was 275 banks in MENA countries from 1990 to 2011.

Simpasa & Pla (2016) conducted a study on the effect of bank lending in Zambia on higher banking performance. The NPL ratio is used to measure banking performance. The results of this study show that lending that focuses on several bank credit sectors is inversely proportional to risk. The more banks in Zambia concentrate credit on just a few sectors, the less credit risk banks in Zambia face. Focusing credit into a specific sector or the term 'putting all the eggs in one basket' is the optimal management in the distribution of financing in a Zambian bank. This is because concentrating on the concentration of credit will reduce costs, and credit is more controllable so profitability can increase.

Masrurroh (2018) researched financing diversification to increase profitability in Islamic banks. Using HHI and multiple linear regression analysis with data for the 2013-2017 period, the results of partial diversification based on contract types did not affect the ROA of Islamic banks, financing based on economic sectors had a significant negative impact on the ROA of Islamic banks, and financing based on use had a positive effect on ROA.

Lestari & Tanuatmodjo (2020) researched financing diversification in increasing ROA using BUS data for six years, from 2013 to 2018. The degree of diversification using the HHI formula. This research obtained the results of contract diversification negatively affecting profitability, type diversification of use financing has a positive effect on ROA, and diversification of financing types of economic sectors positively impacting ROA.

Mulwa (2018) intends to reveal two questions: whether banks can monitor credit diversification effectively and whether credit diversification in the economic sector can increase profitability. The data is sourced from the Central Bank Supervisory Report at the EAC (East African Community) for 2008-2015 with the GLM (Generalized Linear Models) analysis method. The results of this study prove that credit diversification has a significant negative effect on asset quality and increased asset returns. This means that credit diversification in the economic sector impacts the effectiveness of credit monitoring in the banking industry.

However, in his research, Winton (2005) revealed that the bank's strategy in managing bad loans on loans is expensive, especially the need for a
budget that will also increase costs. Credit diversification will be adequate if the risk exposure is moderate and the incentive for loan monitoring is low. When credit diversification has a high risk of default, there will be a greater risk of bank failure. Based on the explanation above, financing diversification in Islamic banking reduces the risk of bad debts and impacts the profitability of Islamic banking. Therefore, it can be concluded that the research hypothesis is:

H1: Financing diversification based on the contract of Islamic Banking positively affects profitability.

H2: Financing diversification based on the use of financing of Islamic Banking positively affects profitability.

H3: Financing diversification based on economic sectors of Islamic Banking positively affects profitability.

H4: Financing diversification based on contracts of Islamic Banking negatively affects credit risk.

H5: Financing diversification based on the use of financing of Islamic Banking negatively affects credit risk.

H6: Financing diversification based on economic sectors of Islamic Banking negatively affects credit risk.

3. METHOD

The approach used in this study is quantitative. It uses secondary data on BUS and UUS with a monthly period obtained from the Sharia Banking Report Statistics published by the OJK from 2016 to 2021. In addition, this report contains various sources of information such as NPF, ROA, financing based on contract, financing based on the use of financing, and financing based on economic sectors.

This research focuses on the effect of the diversification of Islamic Banking financing in Indonesia on increasing ROA and decreasing NPF. There are two variables, namely the dependent variable and the independent variable. In this study, the dependent variables are ROA and NPF, and the independent variables are financing based on contract (HHIA), financing based on the use of financing (HHIP), and financing based on the economic sector (HHIE). The table below describes the operational definition of variability as follows:

<table>
<thead>
<tr>
<th>Variable (HHIE)</th>
<th>Description</th>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPF</td>
<td>Net Performing Financing</td>
<td>The ratio of non-performing financing in Islamic Banking.</td>
</tr>
<tr>
<td>ROA</td>
<td>Return On Asset</td>
<td>Indicators that show high profits are followed by a good level of efficiency.</td>
</tr>
<tr>
<td>HHIA</td>
<td>“Financing diversification based on the contract”</td>
<td>A certain amount of funds is allocated to support the procurement of certain goods/services/assets based on existing contracts in Islamic banking</td>
</tr>
<tr>
<td>HHIP</td>
<td>“Financing diversification based on the use of financing”</td>
<td>A certain amount of funds allocated to support the procurement of certain goods/services/assets based on the use of funds</td>
</tr>
<tr>
<td>HHIE</td>
<td>“Financing diversification based on economic sectors”</td>
<td>A certain amount of funds is allocated to support the procurement of certain goods/services/assets based on the economic sector</td>
</tr>
</tbody>
</table>

Source: Processed from various sources

The analysis method in this study uses multiple linear analyses. Hypotheses are tested partially and simultaneously. (1) Simultaneous Significance Test (F test) is used to see the effect of independent variables on dependent variables together (Kuncoro, 2013). (2) Partial Significance Test (t-test) to see whether or not an independent variable has an effect on a dependent variable if another independent variable is of constant value (Ghozali, 2018). To test these variables, the econometric model is constructed as follows:

Model 1:

\[ ROA_t = \alpha_0 + \beta_1 HHIA_t + \beta_2 HHIP_t + \beta_3 HHIE_t + \epsilon_t \ldots \ldots (1) \]

Model 2:

\[ NPF_t = \alpha_0 + \beta_1 HHIA_t + \beta_2 HHIP_t + \beta_3 HHIE_t + \epsilon_t \ldots \ldots (2) \]
Where, 
ROA = “Return On Asset.”
NPF = “Non-Performing Financing.”
HHIA = “Credit concentration based on contract (Hirschman Herfindahl index).”
HHIP = “Credit concentration based on the use of financing (Hirschman Herfindahl index).”
HHIE = “Credit concentration based on economic sector (Hirschman Herfindahl index).”
β = “The regression coefficients.”
α = “Constant”
ε = “Error term”

The method used to measure financing diversification in this study used the HHI (Hirschman Herfindahl index) method. HHI is a method for measuring market concentration on a scale of 0 to 1. If HHI is close to 1, then diversification in the economy means low, which means that bank diversification is more focused and concentrated only on a few sectors and vice versa (Simpasa & Pla, 2016).

The formula for calculating HHI is as follows:

\[ HHI = \sum_{i=1}^{n} \left( \frac{X_i}{Q} \right)^2 \]

Where,
HHI = “Hirschman Herfindahl Index”
n = Number of Groups Measured
i = Group Measured
Xi = Amount of Group Financing
Q = Total Amount

4. RESULT AND DISCUSSION

Simultaneous and Partial Test Results

Simultaneous Test

From the results of multiple linear tests, the following results are obtained:

<table>
<thead>
<tr>
<th>Table 3. Adjusted R-Squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjusted R-squared Model 1</td>
</tr>
<tr>
<td>Adjusted R-squared Model 2</td>
</tr>
</tbody>
</table>

Source: Eviews Processed

From table 3, it can be seen that in model 1, the dependent variable, namely the ROA variable, is influenced by independent variables, namely HHIA, HHIP, and HHIE, by 76.29%, while the remaining 23.71% is influenced by other factors not mentioned in this study. On the other hand, the model of 2 of independent variables, namely HHIA, HHIP, and HHIE jointly influenced the NPF variable by 82.16%, while the remaining 17.84% was influenced by other factors that were not present in this study.

T-Test The Impact of Financing Diversification on Performance (ROA)

<table>
<thead>
<tr>
<th>Table 4. Research Results of The Impact of Financing Diversification on Performance (ROA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
</tr>
<tr>
<td>---------</td>
</tr>
<tr>
<td>C</td>
</tr>
<tr>
<td>HHIA</td>
</tr>
<tr>
<td>HHIP</td>
</tr>
<tr>
<td>HHIE</td>
</tr>
</tbody>
</table>

Source: Eviews Processed

The hypothesis test for credit diversification of profitability is shown in table 4 above. The equation of the results of processing data can be written as follows:

\[ ROA = 14.229 - 0.0029HHIA - 0.0011HHIP + 0.0045HHIE \]

Table 4 shows that only contract-based diversification has an effect, but the direction of influence of these variables is negative. Meanwhile, diversification financing based on the use of financing does not affect the profitability of Islamic Banking. Diversifying financing based on economic sectors impacts profitability in a positive direction.

The diversification of contract-based financing negatively affects the profitability of Islamic Banking. This result means that the diversification of financing based on the contract will reduce the profitability of Islamic Banking. This can happen if the increasing diversification of contract-based financing is followed by an increase in lousy bank loans (Macroprudential Policy Department Bank Indonesia, 2017)

Figure 2. NPF dan ROA Tahun 2021

Source: SPS OJK (Processed)

From figure 1, it can be seen that the increase and decrease in ROA, in general, is also followed by an
increase and decrease in NPF, or vice versa. Even in some months, such as February to March and July to August, the decline in ROA was followed by an increase in the NPF of Islamic banking. This contract-based financing is a diversification with a low focus based on the value of HHI, which tends to be above 0 (Lestari, Tanuatmodjo, 2020).

These results show that diversification financing based on the use of financing does not increase banks' profitability. This is supported by research (Masruroh, 2018), where not all diversification has an effect and positively affects profitability. Diversification of contract-based financing has no impact, and economic sector-based financing negatively affects profitability. Simpas & Pla (2016) state that diversification does not increase banking profitability. Adzobu et al. (2017) suggest diversifying credit portfolios does not increase performance and profitability and reduces bank credit risk. Financing diversification has significant risks but is not followed by high profits, which is not in line with the "High-Risk High Return" theory that everything with increased risk should be followed by large profits.

The diversification of financing based on economic sectors has a positive effect on profitability following research conducted by (Lestari, Tanuatmodjo, 2020), (Prastiwi & Anik, 2020a), and (Ammar & Boughrara, 2019). The HHI indicator on this diversification is below 1, or it can be said that the diversification of financing based on this economic sector is highly diversified. This high diversification is also able to increase the profitability of Islamic banking. In addition, financing in the economic sector is accelerating when compared to other types of financing because government regulatory factors in accelerating the economy will greatly impact the increase in loans to banks and open up greater opportunities for banks to more easily channel credit to those who need financing (Cecchetti & Kharroubi, 2013).

T-Test The Impact of Financing Diversification on Credit Risk (NPF)

Table 5. Research Results of The Impact of Financing Diversification on Credit Risk (NPF)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>t-Statistic</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>-36.72958</td>
<td>-4.641680</td>
<td>0.0000</td>
</tr>
<tr>
<td>HHI</td>
<td>0.005376</td>
<td>6.866967</td>
<td>0.0000</td>
</tr>
<tr>
<td>HHIP</td>
<td>0.008859</td>
<td>2.581023</td>
<td>0.0121</td>
</tr>
<tr>
<td>HHIE</td>
<td>-0.014991</td>
<td>-4.472068</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Source: Eviews Processed

The hypothesis test for financing diversification against NPF is shown in table 4 above. The equation of the results of processing data can be written as follows:

\[
NPF = -36.729 + 0.0053\text{HHIA} + 0.0088\text{HHIP} - 0.0149\text{HHIE}
\]

From table 4, it is known that the diversification of contract-based financing and the use of financing affects NPF in a positive direction. Meanwhile, financing diversification based on economic sectors has a negative effect on NPF. This result means that increasing diversification of contract-based financing and diversification of financing based on the use of financing will increase the risk of failure to finance. The distribution of financing to banks must undoubtedly be followed by monitoring. The more diversification of financing, the more efforts to monitor banks. In both of these categories, it is possible that the costs and efforts to monitor financing are not proportional to the high credit risk of financing based on contracts and usage. In addition, the effectiveness of the monitoring carried out by banks in the new sectors may be less effective. It could also be because monitors on more diversification of financing create higher monitoring incentives. This is in line with research conducted by (Winton, 2005). Simpas & Pla (2016) stated that centralized financing distribution in only a few sectors would lower the risk of bad debts faced by banks.

On the other hand, sector-based financing diversification has a significant negative effect on NPF, which means that the more diversified financing, the more it reduces the risk of default or bad debts in Islamic banks. Prastiwi & Anik, (2020) stated that this sector-based financing diversification could show the effectiveness and efficiency of monitoring the banking industry. The HHI value of 0.21, which is close to the value of 0, means that diversification activities tend to be high. This result is corroborated by the research (Mulwa, 2018). In his study, it is known that sectoral-based credit diversification adds to the effectiveness of banking monitoring.

5. CONCLUSION

The study was conducted to examine the effect of financing diversification in three categories carried out by Islamic Banks, namely financing diversification based on contracts, based on the use of financing, and the economic sector on improving the
performance and profitability of Islamic banking, as well as reducing the risk of Islamic banking financing. Of the three diversifications, only one category of diversification can increase profitability and reduce bad debts, namely the diversification of financing based on economic sectors. This is possible in the diversification of financing based on this economic sector is indeed most concentrated on diversifying its financing and being effective in monitoring its loans. Thus, this diversification can increase bank performance and profitability and destroy bad loans in Islamic banking. In addition, financing in the economic sector is accelerating compared to other types of financing because government regulatory factors in accelerating the economy will significantly impact the increase in loans to banks and open up more significant opportunities for banks to channel credit more easily to those who need financing. For this reason, disbursing financing to diversify Islamic banking financing, it is necessary to be effective and efficient in monitoring policies and considering credit exposure compared to the income obtained by Islamic banks from distributing such financing.

6. REFERENCES


www.ojk.go.id