Analysis of the determinants of Sharia Commercial Bank’s Profitability for the Period of January 2015 – December 2020

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Abstract

Sharia Commercial Banks not only function as intermediary institutions that collect and distribute public funds. Currently, Sharia Commercial Banks is one milestone used by the government in increasing the potential of the developing sharia economy in Indonesia. This thing, of course, will make Sharia Commercial Banks must develop their performance to be better. To monitor the performance, the profitability ratio that is impacted by various factors is used. This study is conducted to know the impact of capital adequacy, liquidity, credit risks, and operational efficiency on Sharia Commercial Bank’s profitability. liquidity and operational efficiency variables have a significant negative impact. Capital adequacy have a significant positive impact. Whereas NPF has an insignificant positive impact on Sharia Commercial Bank’s profitability.

Keywords: liquidity, operational efficiency, credit risk, capital adequacy, probability.

Abstrak


Kata Kunci: likuiditas, efisiensi operasional, kecukupan modal, risiko kredit, probabilitas
Introduction

Currently, the Indonesian government is trying to increase the sharia economic potential to keep growing well. It is proven by the position of Indonesia, which is in the rank of 4th, in sharia finance development that has total assets reached USD 99 billion. In an effort to continue to improve the development of sharia financial, one way is to increase the performance of Sharia Commercial Banks. As the intermediary financial institution, Sharia Commercial Banks must have good work performance in every activity carried out. To make the performance continuously monitored, a profitability ratio is needed.

According to Harahap, profitability can picture banking's ability to earn profit through all of the existing skills and sources. However, earning profit is not easy, especially for a financial institution such as sharia banks. It is caused by a number of components that affect the profitability, such as capital adequacy, liquidity, credit risk, and operational efficiency.

In various studies, those components give different results. In the research of Syamsudin, Raharjo, Warsa and Mustanda capital adequacy has a positive impact on profitability, while the results of the research from Putrianingsih and Muin stated that capital adequacy has a negative impact on profitability. Then for the liquidity in Mulati & Pinasti has a negative impact on profitability. However, that statement is not supported by research of Suryani dan Darsita, which stated that liquidity positively affects profitability. Research from Rahmatia & Fitriana resulted credit risks have a negative impact on profitability; however, Susilowibowo and Muliawati showed the opposite result. A study on operational efficiency also experienced

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4 Raharjo, Setiaji, and Syamsudin.
15 Sri Muliawati.
differences; Hutagalung\textsuperscript{16} dan Yatiningsih\textsuperscript{17} stated that operational efficiency negatively affects profitability, while research from Zulfikar\textsuperscript{18} & Susilowati\textsuperscript{19} stated it has a positive impact.

The whole study used the same measurement. Capital adequacy was calculated with Capital Adequacy Ratio (CAR), liquidity pictured through Financing to Deposit Ratio (FDR), credits risks with Non-Performing Finance (NPF) ratio, and operational efficiency with the Operating Expense Ratio (OER). However, there are still differences in the result. The research gap in previous studies was caused by the difference in the data used, such as selected period years, only used certain samples of sharia banks, and different analysis methods. Thus, further study is needed by using comprehensive and newest sharia banks data so that the study result can picture sharia banks generally in Indonesia. The purpose of this study is to examine the effect of capital adequacy, liquidity, credit risk and operational efficiency on profitability in Islamic Commercial Banks using multiple regression analysis method.

The Risk-Bearing Theory of Profit, which Hawley Frederick disclosed in 1893, stated that a company would not get profit if not taking risks. In sharia banks, the most general risk is credit risks raised from financing, which is the bank’s primary source of income. Even 90% of the bank’s income is from financing\textsuperscript{20}. The risks cannot be removed because it is attached to the financing, so that the bank must be willing to take the existing risks to make the activities in looking for profit keep running. The size of the risk is caused by the number of customers’ failure to fulfill responsibility against the bank to return financing. Therefore, the customers’ failure in refund financing caused the bank to suffer a loss due to the loss of capital and profit that were approximated before. Thus, the greater the measured risks credit with NPF, profitability will continually decrease\textsuperscript{21}. It is supported by Fitriana\textsuperscript{22}, Putrianingsih & Yulianto\textsuperscript{23} also Ambarawati & Abundanti’s\textsuperscript{24} research. Based on those, the hypotheses was developed:

\begin{equation}
H_1: \text{Credit risk (NPF) has a negative effect on profitability of Islamic Commercial Banks}
\end{equation}

Not only taking risks, but sharia banks also have to manage risks well under the implementation of risk-bearing profit theory. Risks are identical with losses that cause the instability of sharia banks, and to sustain the losses, sharia banks use capital adequacy. The amount of capital adequacy will make the sharia banks stronger in facing risks; besides, with capital adequacy’s existence, public funds’ safety will be guaranteed, and the bank’s stability in carrying out operational activities will be kept maintained. Banks that have big capital are considered safer if compared with banks that have small capital\textsuperscript{25}. The small capital adequacy

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\bibitem{22} Fitriana.
\bibitem{23} Putrianingsih and Yulianto.
\bibitem{25} Andreas Dietrich and Gabrielle Wanzenried, ‘What Determines The Profitability of Commercial
\end{thebibliography}
will make sharia banks too vulnerable when risks come, interfering with the safety of the public's fund and operational activity. The instability of sharia banks in carrying the activities and the total of losses due to vulnerability on risks will significantly reduce profits, thereby lowering profitability. This is evidenced by research from Raharjo et al., Warsa and Mustanda. It is proven by liquidity will go bankrupt; the greater the OER; the greater the FDR ratio, and the greater short-term liabilities that must be immediately fulfilled to refund those funds because people can take their funds back at a time. The smoothness of banks in fulfilling the short-term liabilities is called liquidity. Banking liquidity in this study uses the FDR ratio, the greater FDR ratio, and the greater short-term obligation on depositors' funds. The smoothness of liquidity becomes important because banks that cannot fulfill the liquidity will go bankrupt. The smoothness of liquidity can be achieved by providing reserve funds. However, the reserve funds will decrease funds in the financing, and increasing idle funds and profit will reduce. Therefore, liquidity will always be opposite to profitability. Hakim's and Pinasti's studies show that liquidity has a negative impact on profitability. So, the hypotheses was developed:

H²: Capital adequacy (CAR) has a positive effect on profitability of Islamic Commercial Banks

As the intermediary institute, Sharia banks will manage public funds into various banking products to increase profit. Therefore, banks have short-term liabilities that must be immediately fulfilled to refund those funds because people can take their funds back at a time. The smoothness of banks in fulfilling the short-term liabilities is called liquidity. Banking liquidity in this study uses the FDR ratio, the greater FDR ratio, and the greater short-term obligation on depositors’ funds. The smoothness of liquidity becomes important because banks that cannot fulfill the liquidity will go bankrupt. The smoothness of liquidity can be achieved by providing reserve funds. However, the reserve funds will decrease funds in the financing, and increasing idle funds and profit will reduce. Therefore, liquidity will always be opposite to profitability. Hakim's and Pinasti's studies show that liquidity has a negative impact on profitability. So, the hypotheses was developed:

H³: Liquidity (FDR) has a negative effect on profitability of Islamic Commercial Banks

The competition that becomes tighter makes sharia banks must pay attention to operational efficiency. The thing is needed to make the operating expenses not too big and reduce income too much. So efficiency is one of sharia banks' success indicators to gain profit. Banks that are not efficient cannot compete with other banks in terms of service or pricing, and it causes customers to switch to other banks, and, of course, the source income will also disappear. Operational efficiency is measured by the OER; the greater the OER value, the more inefficient the bank, thereby reducing profitability. It is proven by Hartini and Wibisono's research that stated....
the existence of a negative relationship between operational efficiency (OER) with profitability.

H4 : Operational efficiency (OER) has a negative effect on profitability of Islamic Commercial Banks.

Method

The object in this study is the overall Sharia Commercial Banks by using quantitative data type obtained from Financial Services Authority for the period of January 2015 to December 2020. The data selection in those periods caused by sharia banking statistics in previous years does not separate between the data of Sharia Commercial Banks from Islamic Rural Bank and Sharia Business Unit. Dependent variables used in profitability measured by ROA. Then the independent variables cover capital adequacy measured by CAR, liquidity measured by FDR, credit risks measured by NPF, and operational efficiency measured by OER.

The data is analyzed by multiple linear regression and classical assumption test, which cover multicollinearity, normality, autocorrelation, and heteroscedasticity test. A classical assumption test is needed to know the good and unbiased regression model.

Multiple linear regression equations used:

\[ Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 \]

Description:
Y = Profitability (ROA) of Islamic Commercial Bank
\( \alpha \) = Constant
\( \beta \) = Slope
X1 = Capital Adequacy (CAR)
X2 = Liquidity (FDR)
X3 = Credit Risk (NPF)
X4 = Operational Efficiency (OER)

Results

The following section presents the findings on the effect of capital adequacy, liquidity, credit risk and operational efficiency on the profitability of Islamic Commercial Banks:

Multicollinearity Test

Multicollinearity caused the regression results to become invalid because it caused the coefficient to be very weak and not represent both nature and impact of independent variables. Therefore, it needed a multicollinearity test with Variance Inflation Factor (VIF) method. In the study data, the VIF of all study variables is below ten, so multicollinearity does not affect the regression results.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Centered VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>NA</td>
</tr>
<tr>
<td>CAR</td>
<td>1.0907</td>
</tr>
<tr>
<td>FDR</td>
<td>1.0147</td>
</tr>
<tr>
<td>NPF</td>
<td>1.1017</td>
</tr>
<tr>
<td>BOPO</td>
<td>1.0115</td>
</tr>
</tbody>
</table>

Source: Secondary data, processed.

Normality Test

Completing the classic assumption test required variables data that are normally distributed, thereby needing a normality test by Jarque-Bera. The research data resulting:

<table>
<thead>
<tr>
<th>Normality Test Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Image 1.</td>
</tr>
</tbody>
</table>


It can be observed if the probability value obtained is over 0.05, the variable data used is normally distributed.

**Autocorrelation Test**

In knowing the correlation between nuisance error in certain periods with error, the autocorrelation test with the Breusch-Godfrey LM Test method is used.

**Table 2.**

<table>
<thead>
<tr>
<th>Autocorrelation Test Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-statistic</td>
</tr>
<tr>
<td>Obs*R-squared</td>
</tr>
<tr>
<td>Prob. F(2,41)</td>
</tr>
<tr>
<td>Prob. Chi-Square(2)</td>
</tr>
</tbody>
</table>

Source: Secondary data, processed.

Based on the results of the autocorrelation test, the chi-square probability is bigger than the significance value of 0.05, so that the regression model used is not affected by autocorrelation.

**Heteroscedasticity Test**

In knowing the existence of the variance of the residual regression inequality on one study to another is needed a heteroscedasticity test. The study used the method of Breusch Pagan Godfrey.

**Table 3.**

<table>
<thead>
<tr>
<th>Heteroscedasticity Test Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-statistic</td>
</tr>
<tr>
<td>Obs*R-squared</td>
</tr>
<tr>
<td>Scaled explained SS</td>
</tr>
<tr>
<td>Prob. F(4,43)</td>
</tr>
<tr>
<td>Prob. Chi-Square(4)</td>
</tr>
<tr>
<td>Prob. Chi-Square(4)</td>
</tr>
</tbody>
</table>

Source: Secondary data, processed.

Based on the heteroscedasticity test, the probability value of chi-square is bigger than the significance value of 0.05, so the regression model is not affected by heteroscedasticity.

**Multiple Linear Regression**

The study data is analyzed by using multiple linear regression or Ordinary Least Square (OLS). The use of OLS is to know the relation of capital adequacy variables, liquidity, credit risks, and operational efficiency on Sharia Commercial Banks' profitability.

**Table 4.**

<table>
<thead>
<tr>
<th>Multiple Linear Regression Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variabel</td>
</tr>
<tr>
<td>C</td>
</tr>
<tr>
<td>CAR</td>
</tr>
<tr>
<td>FDR</td>
</tr>
<tr>
<td>NPF</td>
</tr>
<tr>
<td>BOPO</td>
</tr>
</tbody>
</table>

Source: Secondary data, processed.

Based on the regression result, it can be seen that capital adequacy variables measured by CAR ratio have the probability of 0.0420 is below the significance of 5%, and coefficient of 0.014123. So it can be concluded that capital adequacy variables measured by CAR have a significantly positive impact on profitability. The liquidity measured by the FDR ratio produced a probability of 0.0321 under the significance of 5% and a negative coefficient of -0.00534. So, it can be concluded that liquidity measured by FDR significantly has a negative impact on profitability. Credit risks variables measured by the NPF have a probability of 0.9601 above the significance of 5% and a positive coefficient of 0.000773. Thus, it can be concluded that credit risks measured by the NPF have an insignificant positive impact on profitability. Furthermore, the operational efficiency variables measured by the OER ratio have a probability of 0.0000 under the significance of 5% and a negative coefficient of -0.11179. So, the operational efficiency measured by the OER significantly has a negative impact on profitability.
Silmultaneously, all of the variables are capable of giving an impact on profitability because of the statistical probability F of 0.000000 under the significance value of 5%. All of the variables on the regression model used are capable of explaining dependent variables of 93.7%, and the rest is 6.3% affected by the variables out of the study.

Impact of Capital Adequacy on Profitability

Capital adequacy variables measured by the Capital Adequacy Ratio (CAR) significantly impact Sharia Commercial Banks’ profitability. It means that the amount of CAR can increase profitability. The positive impact caused by capital adequacy has functioned as one of the anticipations of loss caused by risks. The operational activities in gaining profit are uninterrupted and keep increasing the profitability. Following the risk-bearing theory of profit, the profit will continuously increase when the risks can be well anticipated.

Bank Indonesia has established the minimum standard of capital adequacy, which is 8%. That thing is needed to keep the stability of Sharia Banks because the function of the modal is to sustain losses. So, when the risks come, the impact will not interfere with the operational activities. Besides, with the existence of capital adequacy, the depositors’ funds will be kept safe. It signifies that the greater capital adequacy, the safer and stabler the sharia banks’ operational, so the effort to increase profit will keep going. But on the contrary, banks that have small capital adequacy will be too vulnerable to risks. It can make the loss impact bigger and, of course, will impact the reduction of profitability due to the unstable condition of the bank. This was confirmed by Dietrich & Wanzenried, that banks with large capital will be much safer than banks with small capital. So banks with large capital adequacy will be much safer in carrying out operational activities to increase profitability.

Another positive impact that gives capital adequacy is the existence of business expansion skills. Banks that do not do business expansion will only get stagnant profit or decrease, so they need a business expansion to get new profit sources. However, business profit can only be made when banks are stable and not vulnerable to risks because the safety in doing the expansion is guaranteed. When banks are forced to do business expansion when weak with risks, it will endanger the bank's sustainability because the chance of gaining the risks is bigger. If it cannot be overcome, it will be very detrimental. Thus, profitability will be increased when the capital adequacy is sufficient and when the business expansion can be done.

The result of this study is also confirmed by the previous studies, the research of Syamsudin and Pratama that stated the capital adequacy measured by CAR has a significant positive effect on profitability.

Impact of Liquidity on Profitability

After going through the regression process, it can be seen that liquidity has a significant negative impact on Sharia Commercial Banks’ profitability. It means that the more smooth the liquidity, the lower the profitability. The negative impact occurs because the sharia banks do not optimize their funds which creates idle funds, which reduces profitability.

40 Dietrich and Wanzenried.
43 Raharjo, Setiaji, and Syamsudin.
In operational activities, banks rely on financing as the primary income source. Even 90% of sharia banks’ income is from financing. The distribution of the financing used the third-party funds, so the banks have liabilities to return the funds immediately because depositors can take their funds back at a time. The more financing disbursed, the more banks’ short-term liabilities increase so that the smoothness of bank liquidity will decrease. However, on the other hand, bank profitability will increase due to increased financing, which is a source of profit for sharia banks. On the contrary, if the sharia banks reduce financing distribution, then the smoothness of liquidity will increase. It is caused by the decrease of banks’ short-term liabilities in refunding the third-party’s fund, thereby making it easier for the bank to improve liquidity. Financing reduction, of course, will also reduce profitability due to the reduction of profit sources from sharia banks. Horne stated a similar thing that the relation of liquidity and profitability will always be the opposite. When choosing to increase liquidity, profitability will decrease, as well as when choosing to increase profitability, smooth liquidity will decrease.

Relation between liquidity and profitability creates a trade-off where sharia banks must be wise in choosing one for the sake of bank continuity. It is equity if sharia banks prefer to improve the liquidity because banks that cannot fill the liquidity will go bankrupt. It occurs because the bank must provide funds for depositors who want to take their funds back. However, when the funds cannot be fulfilled, the bank will slowly sell its various assets to keep the third-party’s fund safe. If it gets worse, the sharia banks’ assets will slowly run out and will end up bankrupt. On the other hand, if sharia banks choose to improve profitability, it is also counted as equity since the bank’s primary purpose is to achieve profit maximally. Therefore, banks will increase the financing with side effects of reduced liquidity’s smoothness. The result of this study is supported by Muliawati and Pinasti’s research that measured liquidity by FDR and gave a significant negative result on profitability.

Impact of Credit Risks on Profitability

This study results in a variable relation between credit risks and profitability which is insignificantly positive. The cause of the result to be insignificant is the nature of risks that give the impact of loss. The loss appears because customers cannot refund the financing given by sharia banks. It causes the capital turnover to be disrupted and even lose the approximated capital and profit. The loss of capital and profit, also the disrupted capital turnover, can reduce profitability. Enlarged credit risk is a sign of increasing non-performing financing, which has the opportunity not to return financing funds belonging to sharia banks. So that no matter how small the credit risks are, it is still reducing profitability. These risks cannot be eliminated but can be minimized. Besides, credit risks also can be pictured on sharia banks’ financing quality. Miadalyni and Dewi said that optimized financing would be in line with

45 Fahmi.
46 Horne and Machowicz.
47 Goodhart.
50 Sri Muliawati.
51 Pinasti and Mustikawat.
banks’ purpose, achieving profitability by the target. The amount of the credit risks is a sign that financing given is not optimal and not quality, so it cannot provide profitability according to the target desired by sharia banks. The results of this study are supported by research from Capriani & Dana which states that there is an insignificant positive effect between credit risk and profitability.

**Impact of Operational Efficiency on Profitability**

Operational efficiency measured by Operational Efficiency Ratio (OER) in this study results in significant negative relation on profitability. The immense OER value causes a negative impact, and there are indications that sharia banks are not efficient in running operations; thereby, the current expenses are increasing and reducing income.

Currently, banks are obligated to be efficient in their operational activities in order to survive in the increasingly fierce competition. Banks that are not efficient will lose in pricing, service, and the product quality offered to the customers. If it is not fixed immediately, the customers will slowly get more attracted to other banks that have a better value in pricing, service, and product quality because they can maximize efficiency. Customers transfer to other banks will, of course, eliminate profit and third-party’s fund source, impacting the decreased profitability. Wheelock and Wilson stated that efficiency is a banks’ success indicator in gaining profit. So the lower the OER value, the more profit will increase; conversely, the higher the OER value, the profit will decrease. The result of the study is supported by Hartini’s and Wibisono’s research, which stated that operational efficiency measured by OER has a significant negative impact on ROA.

**Conclusions**

According to the study results, it can be concluded that the capital adequacy measured by CAR has a significant positive impact on profitability because it provides safety in facing risks and convenience in running business expenses which can increase Sharia Commercial Banks’ profit. Moreover, the liquidity measured by FDR has a significant negative impact on profitability because, for the smoothness of liquidity, banks will reduce financing and automatically create idle funds; thereby, profit sources will be reduced. On credit risks measured by NPF, an insignificant positive relation occurred on profitability. The cause is the nature of the risks themselves, which is always detrimental because the credit risk will eliminate the capital and profit from Sharia Commercial Bank financing. Operational efficiency measured by the OER significantly negatively affects profitability because banks that are not efficient will enlarge operational expenses, thus eroding too much profit.

Recommendations that can be given to Sharia Commercial Banks from the study results is that Sharia Commercial Banks must be capable of maintaining the stability between liquidity and profitability so that not only thinking about the smoothness of the liquidity but also maintaining the profitability in an equity step because the primary function of banks is to distribute funds to public not only collect funds. The following recommendation is that sharia banks can improve the operational efficiency to compete with conventional banks that are already great for years so that public interest in sharia banks will increase. It can be


57 Wheelock and Wilson.

58 Hartini.

59 Wibisono and Wahyuni.
done by reviewing the operational activities that are too extravagant but not comparable with the benefits. Another alternative is finding a new method that is more modern and efficient. This study has a limitation that only analyzes according to the Sharia Commercial Banks’ internal factors and measures profitability under the banks’ assets. Further research can include the external factors and measure profitability from other perspectives.

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