The Nexus between CAMELS Index toward Net Profit: Case Study at Bank Muamalat Indonesia

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ABSTRACT

This study aims to determine whether the CAMELS variables can affect Bank Muamalat’s net profit simultaneously and partially. CAMELS variables include: Capital Adequacy Ratio (CAR), Non-Performing Financing (NPF), Net Profit Margin (NPM), Net Operating Margin (NOM), Financing to Deposit Ratio (FDR), Net Open Position (NOP). This study used quarterly financial data for the years 2012 - 2019. Data analysis techniques used multiple linear regression analysis. The results of the F test showed that the CAMELS variables simultaneously had a significant effect on net profit with an adjusted R square of 64%. In the t test, CAR and PDN variables partially had a significant effect on net profit, but the NPF, NPM, NOM, and FDR variables did not affect net profit.

Keywords: CAMELS, Net Profit

INTRODUCTION
The financial performance of banks in Indonesia still has ample opportunity to develop in the future. In terms of capital ratios, asset quality, and earnings, Indonesia's banking sector is better than four other ASEAN countries, namely Malaysia, Singapore, Thailand, and the Philippines (Widyawati, 2018). In addition, Wibowo's research (2015) stated that the average Islamic banking in Indonesia had a better assessment in terms of income ratio indicators than Islamic banking in Malaysia and Thailand.

The existence of Islamic banking in Indonesia has grown rapidly. Currently, 11 Islamic banks have been established in Indonesia and have given birth to various achievements. One of them is Bank Muamalat which is the first Islamic bank in Indonesia. According to Global Finance magazine, on October 13, 2018, at the IMF-World Bank annual meeting in Bali, Bank Muamalat was awarded the best Islamic Bank in Indonesia. This award is the eighth time received by Bank Muamalat as a pioneer of Islamic banking and has a strong brand in the Indonesian people's eyes.

Bank Muamalat must be able to maintain public trust. Therefore, Bank Muamalat must pay attention to the health of the Bank's performance. A healthy bank will have a reasonable profit growth rate so that bank operations activities run smoothly. It is important to maintain the level of profit at a certain level for the sustainability of the Bank to increase public trust.

Bank Indonesia, which has the authority to regulate and supervise banking, issued regulations related to maintaining bank health, namely Bank Indonesia Regulation No. 9/1/PBI/2007 concerning the Rating System for Commercial Banks Soundness Based on Sharia Principles, and BI Circular Letter No. 9/24/DPhs regarding the Assessment System for the Soundness Level of Commercial Banks Based on Sharia Principles (Bank Indonesia, 2007).

CAMELS is a method for analyzing banking health which includes Capital, Assets, Management, Earning, Liquidity, and Sensitivity to market risk. This assessment is carried out quantitatively by taking into account the element of judgment based on the appraisal factors' materiality and significance.

The analysis of this method has been used by several researchers, including Fathoni et al. (2012) which raised the theme CAMELS ratio variable to profit growth in 26 conventional banks in the three-year research period. The variables used include CAR, NPL, NPM, ROA, LDR, and IRR. Salhuteru & Wattimena (2015) conducted a research entitled Bank Performance with CAMELS Ratios towards Earnings Management Practices In-State Banks and Private Banks. The CAMELS ratios used include: CAR, RORA, ROA, NPM, LDR, and MR.

Research by Sari et al., (2017) entitled Analysis of the Effect of the Camel Ratio on Profit Growth; and research conducted by Ebrahimi et al., (2017) entitled The Impact of CAMEL Indexes on Profit Management in Banks Listed on Tehran Stock Exchange, both did not take into account the Sensitivity to market risk ratio variable. While in Nugroho's research (2018), the CAMELS ratio variable used is incomplete; it only includes four variables, namely: CAR, BOPO, LDR, and IRR.

Based on some of these empirical studies, there is still no recent research that takes the theme of the CAMELS variable on net profit in Islamic banks in Indonesia. Therefore, in this study, it is used as the object of the research at Bank Muamalat.
This study aimed to determine the effect of the CAMELS variable on Bank Muamalat’s net profit in 2012-2019. In this study, the soundness of the bank is measured by six ratios based on BI regulations, which include the main or supporting ratios in each of the assessing factors.

In previous research studies, there were differences in the selection of effective indicators in each category in the CAMELS model. Especially in the categories "Management" and "Sensitivity to market risk", both of which are qualitative measurement analysis. This measurement is relatively difficult, so this study uses a quantitative assessment of the CAMELS variable based on a literature review. The following is an explanation of the CAMELS variables used in this study:

**Table 1. CAMELS variable description**

<table>
<thead>
<tr>
<th>CAMELS</th>
<th>Indicator</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital</td>
<td>CAR</td>
<td>Assessing the adequacy of bank capital in securing risk exporters</td>
</tr>
<tr>
<td></td>
<td>(main ratio)</td>
<td></td>
</tr>
<tr>
<td>Asset Quality</td>
<td>NPF</td>
<td>Assess the condition of bank assets to anticipate the risk of default from financing</td>
</tr>
<tr>
<td></td>
<td>(supporting ratio)</td>
<td></td>
</tr>
<tr>
<td>Management</td>
<td>NPM</td>
<td>Assessing the managerial ability of bank managers in running a business</td>
</tr>
<tr>
<td></td>
<td>(literature review)</td>
<td></td>
</tr>
<tr>
<td>Earnings</td>
<td>NOM</td>
<td>Assess the Bank’s ability to generate profits</td>
</tr>
<tr>
<td></td>
<td>(main ratio)</td>
<td></td>
</tr>
<tr>
<td>Liquidity</td>
<td>FDR</td>
<td>Assess the Bank’s ability to maintain adequate liquidity levels to anticipate liquidity risk</td>
</tr>
<tr>
<td></td>
<td>(supporting ratio)</td>
<td></td>
</tr>
<tr>
<td>Sensitivity</td>
<td>NOP</td>
<td>Assess the Bank’s financial capacity in anticipating changes in market risk caused by exchange rate movements</td>
</tr>
<tr>
<td></td>
<td>(literature review)</td>
<td></td>
</tr>
</tbody>
</table>

Sumber: data olahan (2020)

**METHODOLOGY**

This research type is quantitative with secondary data in the form of financial reports taken from the Bank Muamalat website (muamalat.co.id). The data used in this study are financial data for Bank Muamalat.
the period 2012 to the third quarter of 2019. The data analysis technique used is multiple linear regression to test the effect of independent variables on the dependent variable, either simultaneously or partially, using the SPSS 22 program. Multiple regression, namely:

\[ Y = a + b_1 X_1 + b_2 X_2 + ... + b_6 X_6 + \mu \]

Information:
- \( a \) = Constant
- \( b \) = Coefficient
- \( X_1 \) = Capital Adequency Ratio (CAR)
- \( X_2 \) = Non Performing Financing (NPF)
- \( X_3 \) = Net Profit Margin (NPM)
- \( X_4 \) = Net Operating Margin (NOM)
- \( X_5 \) = Financing to Deposit Ratio (FDR)
- \( X_6 \) = Net Open Position (NOP)
- \( Y \) = Net Profit

RESULTS AND DISCUSSION

Descriptive Analysis

The descriptive analysis in Table 2 shows that the CAR, NPF, NPM, NOM, and FDR variables have standard deviation value smaller than the mean (average value). It can be concluded that the variable data does not experience large (homogeneous) fluctuations. The NOP ratio variable has a standard deviation value greater than the average value, so it can be said that the Net Open Position data fluctuates or the spread of data is heterogeneous with a minimum value of 0.08% and a maximum of 13.5%.

Table 2. Descriptive Statistical Analysis Results
Variable | N  | Min | Max  | Mean | Std. Deviation |
---------|----|-----|------|------|----------------|
CAR      | 31 | 10,16 | 18.58 | 13,804 | 1,835 |
NPF      | 31 | 0.78 | 4.76 | 2,927 | 1,253 |
NPM      | 31 | 6.01 | 93.87 | 54,603 | 22,821 |
NOM      | 31 | 0.08 | 0.76 | 0.299 | 0.195 |
FDR      | 31 | 68.05 | 106.05 | 91,577 | 10,632 |
NOP      | 31 | 0.08 | 13.50 | 2,200 | 3,594 |
Net Profit | 31 | 2,407 | 475,847 | 116.79 | 127,672 |

Source: SPSS output (processed data, 2020)

Multiple Linear Regression Analysis

The t-test results showed four independent variables that did not affect the dependent variable: the NPF, NPM, NOM, and FDR; while the CAR and NOP ratio variables significantly affected net profit. The two variables respectively had a significance value of 0.013 and 0.002, which is less than 0.05.

The F test results in a significance value of 0.000, which is less than 0.05. It can be said that simultaneously the independent variables had a significant effect on the dependent variable. This research model had fulfilled the goodness of fit assumption by having the coefficient of determination (R2) obtained from the adjusted R square of 64%. This means that the CAMELS variables (CAR, NPF, NPM, NOM, FDR, NOP) simultaneously had a significant effect on Bank Muamalat’s net profit by 64%. In comparison, the remaining 36% was influenced by other variables not included in this research model.

Table 3. Regression Analysis Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coeff.</th>
<th>t</th>
<th>Sig</th>
<th>Ket</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>-302446</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAR</td>
<td>28530</td>
<td>2,683</td>
<td>0.013</td>
<td>Sig</td>
</tr>
<tr>
<td>NPF</td>
<td>-28059</td>
<td>-1,722</td>
<td>0.098</td>
<td>No sig</td>
</tr>
<tr>
<td>NPM</td>
<td>332</td>
<td>0.422</td>
<td>0.677</td>
<td>No sig</td>
</tr>
<tr>
<td>NOM</td>
<td>-6326</td>
<td>-0.077</td>
<td>0.939</td>
<td>No sig</td>
</tr>
<tr>
<td>FDR</td>
<td>648</td>
<td>0.381</td>
<td>0.706</td>
<td>No sig</td>
</tr>
<tr>
<td>NOP</td>
<td>14467</td>
<td>3,469</td>
<td>0.002</td>
<td>Sig</td>
</tr>
</tbody>
</table>

Adjusted R Square = 0.635
F count = 9.705
F Sig = 0.000

Source: SPSS output (processed data, 2020)

Based on the results presented in Table 1, the regression model equation in this study is:

\[ Y = -302,446 + 28,530 X_1 - 28,059 X_2 + 332 X_3 - 6,326 X_4 + 648 X_5 + 14,467 X_6 \]
Capital Adequacy Ratio to Net Profit

The multiple regression results state that CAR had a significant positive effect on net profit. Any increase in CAR would have an impact on increasing Bank Muamalat’s net profit. The result of this study follows previous research conducted by Ebrahimi et al. (2017) and Nugroho (2018), which stated that partially CAR had a positive effect on earnings; but not in accordance with research by Yunita & Wirawati (2020) which stated that CAR did not affect profitability.

Capital Adequacy Ratio is an assessment of the Bank’s capital adequacy in covering current and future exposures. CAR is an indicator to measure a bank's ability to cover a decrease in assets due to bank losses (Rivai et al., 2013). Therefore, the higher the CAR ratio, the stronger the bank’s capital is. This substantial capital will stimulate banks to generate profits, namely to expand their businesses, including financing and investment, by allocating funds in assets according to the level of risk.

This followed the Bank Indonesia policy which made regulations through the API (Indonesian Banking Architecture) in 2004 which changed the capital adequacy standard from 5% to 8%. The policy was implemented to improve banks’ ability to generate income and improve the quality of bank health.

Non-Performing Financing to Net Profit

This study shows that partially the NPF did not affect net profit, which means that the increase or decrease in the value of NPF did not affect the condition of Bank Muamalat's net profit. The results of the study follow the research of Yunita & Wirawati (2020) and Effendi (2016), which stated that NPF did not affect profitability. However, this study's results were not following Yusuf's (2017) research, which stated that NPF had a significant effect on profitability.

NPF did not affect Net Profit because Bank Muamalat is a Sharia bank that applies a profit-sharing system. This system can minimize problematic financing. The profit-sharing system can share losses according to the percentage agreed between the customer and the Bank. The customer is unlikely to be responsible for the financing received from the Bank. Therefore, the NPF ratio value can be appropriately controlled. This is evidenced in descriptive data; the average value of the NPF in 2012 to the third quarter of 2019 is 2.9%, which is following BI standard provisions, which is still below 5%. A low NPF ratio indicates that the amount of non-performing financing is smaller than the total disbursed financing. Thus it can be said that this Bank had provided reserve funds for the elimination of problematic financing properly.

Although the NPF value in this study did not significantly affect Bank Muamalat’s profit, this could not be ignored because if the percentage value of non-performing financing was too high, NPF would be able to affect the soundness of the Bank.

Net Profit Margin on Net Profit

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NPM (Net Profit Margin) is a ratio to assess the managerial ability in running a business. The greater the NPM ratio value, the better the Bank’s performance in generating a net income from its main operational activities. This ratio also shows that the Bank has adequate efficiency in issuing costs associated with its operating activities. In other words, banks can reduce costs and carry out their business strategies properly to generate profits from their operations.

However, the result of this study indicated that the NPM variable did not affect Bank Muamalat's net profit. These results were consistent with Siregar & Hamdani, (2019), and Hidayati & Purwitosari (2020), which stated that Net Profit Margin did not affect profit growth. This study's results contradicted the research Salhuteru & Wattimena (2015), which stated that Net Profit Margin had a positive effect on earnings management.

Based on the data in Table 2, the average NPM value is 55%, which is included in the unhealthy criteria (51% < NPM < 66%). Thus it can be said that the strategic ability of the Bank in controlling operating expenses was not good (Bank Indonesia, 2007). The NPM value is still below the standard criteria for a healthy NPM score of 81% (Winarso & Park, 2020) so it can be stated that the management aspect, which is proxied by the NPM ratio, has not worked efficiently so that it did not affect the bank’s net profit.

**Net Operating Margin on Net Profit**

The Net Operating Margin (NOM) ratio is used to determine the Bank's ability to generate income from the net operating margin against profit sharing. The higher the NOM percentage value, the better the Bank's ability to generate operating profit from the Bank's productive assets. So, in theory, the greater the NOM ratio, the higher the operating profit obtained from the productive assets managed by the Bank.

Net Operating Margin variable also functions to assess bank performance, which includes managing all forms of margin risk and profit-sharing. There is a linear relationship between changes in profit sharing or margin on income and profit sharing costs or margins, to find out how much net profit is generated by the Bank through the average ability of productive assets to generate profits.

Based on the results of the research, it could be stated that the NOM ratio variable did not affect net profit. The results of this study were not in line with previous research conducted by Irawan & Kharisma (2020) and Yusuf (2017), which stated that the Net Operating Margin had a positive and significant effect on profitability, i.e. the higher the NOM ratio, the higher the profit margin the Bank get.

The NOM ratio value at Bank Muamalat has an average value of 0.299%, which is still far below the standard criteria for the NOM value set by Bank Indonesia of 3% (Bank Indonesia, 2007). So, Bank Muamalat’s performance to process productive assets in generating profits was still very low. Therefore, the NOM ratio, in this case, did not affect net profit.
Financing to Deposit Ratio (FDR) is one of the financial ratios used to determine how optimal the Bank is in managing financing to third party funds. This shows how liquid the Bank can meet the demand of depositors who want to withdraw the money that has been used by the Bank for financing or investment.

In theory, the FDR ratio and profit have a directly proportional relationship, i.e. the higher the FDR ratio, the higher the profit. The higher the FDR ratio’s value indicating that the Bank has channeled large amounts of financing, resulting in a decreased level of bank liquidity. However, by channeling such high financing, the Bank will benefit from the profit sharing or margin from the investment financing.

Based on descriptive statistical data in Table 2, during the observation years, the average FDR value was 91%. This indicates that the Muamalat Bank had channeled financing from third-party funds properly, following the regulatory tolerance limit of Bank Indonesia, which was between 78%-92%.

However, in this study, the FDR variable's value did not have a significant effect on Bank Muamalat’s net profit. The results of this study follow previous research conducted by Suryani (2012), Mokoagow & Fuady (2015), Sari et al. (2017), and Nugroho (2018), which stated that partially the FDR did not affect profitability.

This may occur because third party funds have not been fully channeled in the right form of investment financing. The reason is that in the fourth quarter of 2018 the FDR value suddenly fell to 73%, and continued to decline until in the third quarter of 2019 the FDR value became 68%. The decrease in the FDR ratio value indicates that the Muamalat Bank did not want to increase the amount of financing, while the amount of third party funds was increasing in that year, or the level of liquidity was high. Therefore, the FDR value was not sufficiently influential on changes in earnings.

The low value of the FDR ratio shows that the effectiveness of bank financing is reduced. As an intermediary function, banks should be able to manage funds collected from the public in the form of appropriate investment financing, which will increase bank revenues, both in profit sharing and margin bonuses, which will indirectly increase the Bank's net profit.

**Net Open Position to Net Profit**

In addition to channeling financing to the public, Bank Muamalat has business activities in foreign currency, including the issuance of products and activities in foreign currencies. To avoid various risks that may arise due to market risks, such as economic exposure, translation exposure, and transaction risk. This means that the Bank must manage the foreign exchange structure in terms of assets and liabilities. Banks must be able to find sources of foreign exchange and allocate foreign currency funds properly to get maximum profit.

The t-test results in multiple linear regression analysis showed that the NOP (Net Open Position) variable had a significant positive effect on net profit. The result of this study was in line with previous research conducted by Romadloni (2015), which stated that partially NOP had a positive effect on profitability; but contrary to the results of Mulyani’s research (2020) that NOP did not affect profitability.
This study's results follow the theory of Loen and Ericson in their book entitled 'Foreign Exchange Bank Liability Asset Management,' which stated that market risk had a positive influence on bank profitability. This indicator reflects the level of dependency on bank profitability on fluctuations in interest rates and exchange rates and changes in buying and selling prices (Loen & Ericson, 2008).

The NOP (Net Open Position) variable is an essential ratio for banks to anticipate risks caused by fluctuating exchange rates to maintain bank health. The NOP ratio is a ratio that explains the position of the Bank's foreign exchange amount, by comparing the difference between foreign exchange activity and passive foreign exchange plus the net difference between the foreign exchange balance and the capital owned by the Bank (Rivai et al., 2013). If the exchange rate strengthens, there is an increase in foreign currency income that is greater than the increase in foreign currency costs, so in this case, the profit will increase. This is in accordance with the theory that states that this ratio is an indicator for assessing the ability of a bank capital to cover the effects of market risk caused by exchange rate movements (Rivai et al., 2013).

CAR, NPF, NPM, NOM, FDR, NOP to Net Profit

The results of the F test showed that simultaneously the CAR, NPF, NPM, NOM, FDR, and NOP variables significantly affected Net Profit by 65%. This proves that the CAMELS analysis method proxied by the ratio of Capital Adequacy Ratio (CAR), Non-Performing Financing (NPF), Net Profit Margin (NPM), Net Operating Margin (NOM), Financing to Deposit Ratio (FDR), and Net Open Position (NOP), had a considerable influence in affecting net profit at Bank Muamalat.

CONCLUSION

The CAR and NOP variables partially affected net profit, while the NPF, NPM, NOM, and FDR variables partially did not affect Bank Muamalat’s net profit. The CAMELS variables, which includes: CAR, NPF, NPM, NOM, FDR, NOP, simultaneously had a significant role in improving the health of the Bank because these variables simultaneously affected Bank Muamalat's net profit by 65%. Further study can add research to the CAMELS variable in each aspect of its assessment based on Bank Indonesia regulations, and compare it with the RGEC method.

REFERENCES


