

An Analysis of Financial Ratio Effect with Liquidity and Profitability as Intervening on Sharia Banking Performance in Indonesia for the Years 2015-2018

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Abstract

The paper aims to measure the effect of CAR, NPF, OER, FDR and NOM toward profitability discribed by Return on Assets ratio of sharia banking performance in Indonesia with FDR and NOM as intervening variable. This research uses quantitative method with multiple regression analysis. The samples have taken from sharia banking monthly report that published by Otoritas Jasa Keuangan for the years of 2015 until 2018 in the last month of the issued report. It has analyzed by using an analysis tool, Eviews 9. The results showed that efficiency ratio has negative impact toward ROA. Otherwise, CAR, NPF, FDR and NOM have no significant effect. For the path analysis, FDR and NOM cannot mediating the effect of financial ratio toward ROA.

Keywords : CAR, NPF, BOPO, FDR, NOM and ROA

Introduction

In the year 1998, Indonesia was terrorized by a great crisis in the history. The impact drived the goverment to liquidated most of the interest based commercial banking. However, unexpected, there is a bank that has no influenced. The bank using sharia as his base activity. The bank shows invulnerable because of it uses profit sharing instead of interest as the profit. Nowadays, the banks keep their existance. It can be seen by the interest based banking attempt to increasing the number of shariah unit or even their branch. Most of Indonesian is moslem and the sharia based bank has a chance to grow.

Banking has the important roles in a financial. Its can be described as the heart of economy. The bank collect the funds and distribute them as loans. The loan used by bussines to gain the capital, finally increasing profit. The increased productivity makes the turnover of money become high and the economy is certainly growing. Thus, the bank can prove his position as the pillars of economy. It was be unbearable circumstance that has very wide coverage.

As a crucial institution, the banking needs to always maintained his performance. There are many indicators can show the conditions of bank. Among them, profitability have more capabilities to described the performance of the banks. Sartono have said that profitability is the ability of the company to earn profits and it related to sales, total assets and capital (Mahpudin, 2016:59). Profitability indicates how effectively management of the company is to generate his profit. If the profitability rises, it can be concluded that the company has good performance. Generelly, profitability is measured using Return on Assets ratio (ROA). According to Husnan, the ratio shows the effectiveness of the company to obtains profit by using his assets (Adyani, 2011:3).

Profitability can be influenced by various things. CAMELS is a methods commonly used to analyze financial symptomps that may affect the performance of companies. The factors assessed in this method are asset quality, management, earning, liquidity and sensitivity to market risk. The advantage of this method is that it can provided detailed overview of which can affect the company's performance be seen. Its means, the factors that influence the profitability can be clearly measured and provides more accurate information.

The characteristics of the asset quality is measured by Capital Adequacy Ratio (CAR). This ratio describe the ability of company's capital availabilty againts risk that will appear. Then in terms of the quality of productive asset using Non Performing Financing ratio (NPF). Unlike the conventional banks refers to interest using the name of Non Performing Loan (NPL). The reason was the conventional bank use loans and sharia bank has financing. Next to the effectivity of management, it is measured by Operating Efficiency Ratio (OER) or Biaya Operasional terhadap Pendapatan Operasional (BOPO) in Indonesia. This ratio shows how much the efficiency in operational activity of company. Furthermore, the liquidity level measures using Financing to Deposit Ratio (FDR). This ratio shows the ability of bank in paying off obligations and avoid the risk of liquidity. The conventional bank also applying different name but the theory still can be used. The last, income has measured by Net Operating Margin (NOM). This ratio shows the ability of banks in utilizing their productive assets to gaining profit.

Actually, financial ratio analysis with profitability has been researched and showed various results. The previous researchs concluded that FDR and NOM variable has positive significant effect on ROA. Therefore, in this study added the FDR and NOM as the intervening variable. The intervening of the variable used to mediating the inconsistency of result. The purpose of this study is to examine whether CAR, NPF, OER, FDR and NOM have an influence on ROA with FDR and NOM as intervening variables in the sharia commercial banking for the years 2015-2018.

Literature Review

a. Agency Theory

Anthony and Govindrajan (Ariyanti, 2017:5) said that agency theory has a relation between the principal and the agent. It was assumed that individuals have motivated by interests and bring conflicts to them. Both of them have their position and role related to the bussiness. Regarding to auditing, the principal and the agent are assumed as someone who have economic rationality, where every action that was taken is motivated by personal interests or fulfil its first before the others interest. The principal as the owner of capital has the power to access and obtain classified information about the company which was undertaken by the agent. The agent is responsible for the management control of the company. In addition, the agent is authorized to decide on strategies that will maintaining the goal's company.

b. Signaling Theory

The theory assumed that companies always giving signals to the users. The signal has purposed to described about the superiority of the company. According to Jama'an, the management provide informations through the financial reports that they apply conservatism accounting policies which produce higher quality earnings because the policy prevents companies doing exaggerate profit report and it will make sure to the assets not to be overstated (Jama'an, 2017:6).



1. Research Framework

Source: The Researcher's Processed, 2019

The research model presented above explains that X1 (CAR), X2 (NPF), X3 (OER), Z1 (FDR) and Z2 (NOM) as the independent variable has relation to the effect on the dependent variable Y, ROA.

Theoritical Framework And Hypothesis Formulation

a. The effect of CAR on the profitability

CAR ratio reflects the company's ability to obtain profits using its own capital. The higher of the ratio, the company has a great chance to generate profits because of the large amount of the capital and the management is freely to arrange their fund in the profitable investments. Its can be concluded if CAR rises the the profitability will also pushed. This statement is supported by the reasearch of Prastianingtyas (2010) and Adyani (2011) which states that CAR has a positive and significant impact to the profitability of the bank.

b. The effect of NPF on the profitability

Stiawan (2009:7) have said that NPF is the number problematic loans and may cannot be collectable. The ratio shows financing risk, the higher of the ratio, the worse quality of the financing. A large number of stucked financing in a bank, certainly can lead to the loss of the chances to obtain more profit from financing. It is affect to the profitabilities and the banking will more suffer. The conclusion is that more increase the stucked financing generally make the banking performance pushed down. This statement is supported by the reasearch of Nurkhosidah (2009), Dewi (2010), Adyani (2011) and Pratiwi (2012) which states that NPF has a negative and significant impact to the profitability of the bank.

c. The effect of OER on the profitability

Biaya Operational terhadap Pendapatan Operational (BOPO) or Operating Efficiency Ratio (OER) is a ratio that measure the comparasion between operational cost and operational income. This ratio is used to measure the level of efficiency and ability of banks in conducting operational activities (Dendawijaya, 2005:119). The smaller of this ratio value, the more efficient bank issued operational costs is concerned, with the cost-efficiency makes profit retrieved by the bank, in manner of profitability. This statement is supported by the reasearch of Nurkhosidah Nurkhosidah (2009), Dewi (2010), Adyani (2011), Pratiwi (2012), Wibowo (2013), and Dewi (2017) which states that BOPO has a negative and significant impact to the profitability of the bank.

d. The effect of FDR on the profitability

Financing to Deposit Ratio (FDR) is a ratio used to measure the liquidity of bank in order to repaying withdrawals of the depositors fund using financing. The higher of the FDR, the more of fund that be channeled to the Third Party Funds or Dana Pihak Ketiga (DPK). With the more of channeled fund, the bank's Return on Assets will arises and in theoretically the FDR ratio gives a good effect on the profitability. This statement is supported by the reasearch of Suryani (2011), Adyani (2011), Nugroho (2011) and Pratiwi (2012) which states that FDR has a positive and significant impact to the profitability of the bank.

e. The effect of NOM on the profitability

Net Operating Margin (NOM) or Net Interest Margin (NIM) in the terms of the conventional banking is a ratio that measure the banking ability to manage his productive asset in order to gain profits. If the ratio shows the higher number, its can be concluded that the bank opportunities to obtain the profit will more often. This statement is supported by the reasearch of Sabir (2012), Nurvarida (2017) and Yusuf (2017) which states that NOM has a positive and significant impact to the profitability of the bank.

f. The effect of CAR on the profitability with mediation of FDR

The capital adequacy which rated high indicates good management of liquidities. It is describe the structure of capital known becomes solid. This condition will affect the people trust to save their money in the bank that it is growing more profits. Then, the capital adequacy has indirect effect to the financing and gain profitability. This statement is supported by the research of Hasanah (2017) which stated that liquidity can be able to mediate the effect of CAR toward ROA.

g. The effect of NPF on the profitability with mediation of FDR

According to Hasanah (2017:39), the financing distribution that goes wrong will affect the liquidity of banking, since the cash does not available and it is supposed to increase the liquidity. The bank become unable to fulfill the short-term obligations which will result in loss of chances to obtain the optimum profits from its activity. It is can be concluded that financing problem has sn impact to liquidity and significantly decrease the profit. This statement is supported by the

research of Hasanah (2017) which stated that liquidity can be able to mediate the effect of NPF toward ROA.

h. The effect of OER on the profitability with mediation of FDR

The lower efficiency causes the losses and lead to the decreased profit. The efficiency ratio is used to measure of the management and the ability of their operational activity, especially for loans. Considered by the bank's main operational, the principle is to act as mediator that collects and distributes funds (e.g people fund), the costs and operating income is dominated by the cost and revenues (Dendawijaya, 2005:120). With the operating costs that can be managed efficiently making liquidity preferable. The high level liquidity will help to improve the profitability. The relationship between operational costs and liquidity has been examined by Agustina (2013) and it is stated that OER has a positive significant impact toward liquidity. At the end, the result shows indirectly of liquidities that it is can mediate the efficiency ratio and profitability.

i. The effect of CAR on the profitability with mediation of NOM

The bank with a large amount of capital indicate that it has better capabilities to bear the risk of the risky earning assets. That condition will gives the bank advantages to improve of the performance of the bank so that public trust gained which of coincided to obtain profits. It is can be concluded that the capital improvement makes the increased number of profits. This statement is supported by the research of Wibisono (2017) and Hayati (2017) which stated that NOM can be able to mediate the effect of CAR toward ROA.

j. The effect of NPF on the profitability with mediation of NOM

A lot of bad financing results the worse marking of the performance of the bank. The higher number of NPF causes the expenses to be blowed up and may effecting of the loss. Bad financing will make the bank suffer that lead to lower the financing quality and increase the number of bad financing. In the worse case, the bank must have to deal losses for its operational that decreasing the profit of bank (Kasmir, 2017:45). This statement is supported by the research of Pratiwi (2012) and Wibisono (2017) which stated that NOM can be able to mediate the effect of NPF toward ROA.

k. The effect of OER on the profitability with mediation of NOM

Dendawijaya (2005:120) have said that the operating income of bank is dominated by costs and interest or revenue in the sharia based bank. The ratio of efficiency shows how much the ability of bank to manage its costs. This is related to cost efficiency, considered by the main principle of the bank. The expenditure on providing efficiency gives additional benefits for the bank. Then it can be inferred the income has a relationship with cost efficiency on profitability. This statement is supported by the research of Wibisono (2017) which stated that NOM can be able to mediate the effect of OER toward ROA.

From the explanation above, it can be summed up in the hypothesis in this study. They are:

H1 = There is positive and significant effect between CAR and ROA

H2 = There is negative and significant effect between NPF and ROA

H3 = There is negative and significant effect between BOPO and ROA

H4 = There is positive and significant effect between FDR and ROA

H5 = There is positive and significant effect between NOM and ROA

H6 = The FDR can mediated effect between CAR and ROA

H7 = The FDR can mediated effect between NPF and ROA

H8 = The FDR can mediated effect between OER and ROA

H9 = The NOM can mediated effect between CAR and ROA

H10 = The NOM can mediated effect between NPF and ROA

H11 = The NOM can mediated effect between OER and ROA

Methodology

This study uses secondary data from the variables CAR, NPF, OER/BOPO, FDR, NOM and ROA. The data was obtained from the monthly financial report of sharia commercial banks registered with Otoritas Jasa Keuangan (OJK) Indonesia. The report period is 4 years, which from 2015 until 2018 in the last month of the issued report, so that a total of 45 samples are obtained.

a. Analysis Technique

The analytical method in this study uses quantitive data analysis with the help of a statistic tools, Eviews 9. The analysis are devided into four stages and here is it:

1) Stationer Test

- 2) Regression Analysis (test of determinant coefficient (\mathbb{R}^2), F test and T test)
- 3) Classical Asumptions Test (normality test, multicollinearity test, autocorrelation test and heteroscedasticity test)

4) Path Analysis (Sobel Test)

Research Result

a. Hypothesis Test

Tablel 1 The result of the hypothesis test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CAR	0.101527	0.051624	1.966652	0.0570
NPF	-0.081897	0.071370	-1.147506	0.2587
OER	-0.057286	0.019812	-2.891482	0.0065
FDR	-0.014973	0.020732	-0.722206	0.4748
NOM	0.072916	0.162307	0.449249	0.6559

Source: the researcher's processed, 2019

In the table output, the following regression equation can be formulated as: D(ROA-1) = -0,018146 + 0,101527D(CAR-1) - 0,081897D(NPF-1) - 0,057286D(OER-1) - 0,014973D(FDR-1) + 0,072916D(NOM-1)

The results of hypothesis test can be analyzed as:

1) The effect of CAR toward ROA

H1 = There is positive and significant effect between CAR and ROA The test results obtained t significance of 0,0570. The value is more than 0,05 and it is can be inferred that CAR does not significantly influence on ROA. This means that hypothesis 1 was rejected.

2) The effect of NPF toward ROA

H2 = There is negative and significant effect between NPF and ROA The test results obtained t significance of 0,2587. The value is more than 0,05 and it is can be inferred that NPF does not significantly influence on ROA. This means that hypothesis 2 was rejected.

3) The effect of OER toward ROA

H3 = There is negative and significant effect between OER and ROA The test results obtained t significance of 0,0065. The value is less than 0,05 and it is can be inferred that OER has significant influence on ROA. This means that hypothesis 3 was accepted.

4) The effect of FDR toward ROA

H4 = There is positive and significant effect between FDR and ROA

The test results obtained t significance of 0,4748. The value is more than 0,05 and it is can be inferred that FDR does not significantly influence on ROA. This means that hypothesis 4 was rejected.

5) The effect of NOM toward ROA

H5 = There is positive and significant effect between NOM and ROA The test results obtained t significance of 0,6559. The value is more than 0,05 and it is can be inferred that NOM does not significantly influence on ROA. This means that hypothesis 5 was rejected.

b. Coefficient of Determinant (**R**²) Test

The following are the results of testing the coefficient of determinant:

Dependent Variables	\mathbf{R}^2
ROA	= 0,563
FDR	= 0,154
NOM	= 0,360

Table 2. The result of the coefficient of determinantDependent VariablesR2

Source : the researcher's processed, 2019

From the description above, it can be concluded the ROA effect which can be explained by CAR, NPF, BOPO, FDR and NOM variables was 56%. The rest of 44% is affected by other variables. The effect of FDR and NOM as the intervening variables is 15% and 36% that can be explained by CAR, NPF and OER variables. The rest of its is affected by other variables in another variance.

c. Path Analysis

The analysis of intervening uses the sobel test to see the inderect effect of the FDR and NOM variables. The following are the results of the sobel test :

Variable effects	t		
CAR > FDR	0,372744		
NPF > FDR	0,038776		
BOPO > FDR	-0,07901		
CAR > NOM	1,217337		
NPF > NOM	0,722529		
BOPO > NOM	-1,4543		
	1		

Table 3.	The	result	of	the	sobel	test
T 7						

Source: the researcher's processed, 2019

From the test result above, it is known that t-table is 2,01954. The conclusions can be drawn as follows:

1) The effect of CAR toward ROA with mediation of FDR

H6 = The FDR can mediated effect between CAR and ROA

The test results obtained t-count of 0,372744. The value is less than t-table of 2,01954 with the significant number of 0,05, it is can be inferred that FDR can not be the mediation variable of the effect of CAR and ROA. This means that the hypothesis 6 was rejected.

2) The effect of NPF toward ROA with mediation of FDR

H7 = The FDR can mediated effect between NPF and ROA

The test results obtained t-count of 0,038776. The value is less than t-table of 2,01954 with the significant number of 0,05, it is can be inferred that FDR can not be the mediation variable of the effect of NPF and ROA. This means that the hypothesis 7 was rejected.

3) The effect of OER toward ROA with mediation of FDR

H8 = The FDR can mediated effect between OER and ROA

The test results obtained t-count of -0,07901. The value is less than t-table of 2,01954 with the significant number of 0,05, it is can be inferred that FDR can not be the mediation variable of the effect of OER and ROA. This means that the hypothesis 8 was rejected.

4) The effect of CAR toward ROA with mediation of NOM

H9 = The NOM can mediated effect between CAR and ROA

The test results obtained t-count of 1,217337. The value is less than t-table of 2,01954 with the significant number of 0,05, it is can be inferred that NOM can not be the mediation variable of the effect of CAR and ROA. This means that the hypothesis 9 was rejected.

5) The effect of NPF toward ROA with mediation of NOM

H10 = The NOM can mediated effect between NPF and ROA The test results obtained t-count of 0,722529. The value is less than t-table of 2,01954 with the significant number of 0,05, it is can be inferred that NOM can not be the mediation variable of the effect of NPF and ROA. This means that the hypothesis 10 was rejected.

6) The effect of OER toward ROA with mediation of NOM

H11 = The NOM can mediated effect between OER and ROA

The test results obtained t-count of -1,4543. The value is less than t-table of 2,01954 with the significant number of 0,05, it is can be inferred that NOM can not be the mediation variable of the effect of OER and ROA. This means that the hypothesis 11 was rejected.

Disscusion

Based on the data that was analyzed, the results of hypothesis test can be described as follow:

a. The effect of CAR toward ROA

The result of the first hypothesis shows the CAR variable has a positive but it is not significant againt ROA. This is can be inferred that the sharia banks are not efficiently using their capital. According to Wibowo (2013:8), the bank have tried to maintain its capital adequacy and causing the bank to not let easy to issue the funding. The implication is the size of the capital owned does not provide significant profits to the bank. The result is have similierity with the researchs by Dewi (2010), Pratiwi (2012) and Putri (2015) which is stated that CAR has a positive and not significantly againt ROA.

b. The effect of NPF toward ROA

The result of the second hypothesis shows the NPF variable has a negative but it is not significant againt ROA. Based on the research data, the NPF number shows relatively small. The bad financing should have a bad impact on the bank because of the financing is the bank's main income. However, the small amount of the bad financing can still be overcomed. It does not burden the bank so the bad financing only has a small impact on the income. The result is have similierity with the researchs by Wibowo (2010) and Putri (2015) which is stated that NPF has a negative and not significantly againt ROA.

c. The effect of OER toward ROA

The result of the third hypothesis shows the OER variable has a negative significant againt ROA. The increased operational cost will burden the bank and it leads the bank to decreased income. More less the OER number, the operating costs will be reduced that is increased the income. The result is have similierity with the researchs by Dewi (2010), Wibowo (2013), Pratiwi (2012) and Adyani (2015) which is stated that OER has a negative and significantly againt ROA.

d. The effect of FDR toward ROA

The result of the fourth hypothesis shows the FDR variable has a negative but it is not significant againt ROA. The liquidity ratio in the research is actually quite good, which is above 80%. In otherwise, the result shows the distribution of financing was not sufficient. The financing that should provide benefits was become additional costs. So the amount of financing will causes the losses of bank. The result is have similierity with the researchs by Yuliana (2007), Nurkhosidah (2009) and Dewi (2010) which is stated that FDR has a negative and not significantly againt ROA.

e. The effect of NOM toward ROA

The result of the fifth hypothesis shows the NOM variable has a positive but it is not significant againt ROA. The NOM ratio reflects of how the effectively banks to generate profits using their productive assets. If the bank is not effective to manage its productive assets, it becomes to hard to gaining profits. The ineffectiveness of the financing distribution will reduce the the profit sharing. Eventhough the NOM has an influence but it is still not significant. The result is have similierity with the researchs by Widyawati (2017) and Tristiningtyas (2013) which is stated that NOM has a positive and not significantly againt ROA.

f. The effect of CAR toward ROA with mediation of FDR

The result of the sixth hypothesis shows the FDR variable can not mediate the effect of CAR toward ROA. The sharia bank is paying less attention to its financing sector. A large amount of capital adequacy that is not followed by a good managing about it, will causes to reduce the bank profits. The fact is the bank almost prefer low risk financing so it does not much increase the total of financing. The large capital should be allocated to increase the amount of financing which is the bank's main income so it will gain more profit. As the result, the capital adequacy has less effect on increasing financing. The result is have similierity with the researchs by Wityasari (2014) and Pardede (2016) which is stated that FDR variable can not mediate the effect of CAR toward ROA.

g. The effect of NPF toward ROA with mediation of FDR

The result of the seventh hypothesis shows the FDR variable can not mediate the effect of NPF toward ROA. The increased value of the NPF in this research is relatively small. The bad financing, which is relatively small in number, can still be overcome by the bank and it does not need to increase the financing income to cover the loss. The result is have similarity with the researchs by Wityasari (2014) and Pardede (2016) which is stated that FDR variable can not mediate the effect of NPF toward ROA.

h. The effect of OER toward ROA with mediation of FDR

The result of the eighth hypothesis shows the FDR variable can not mediate the effect of OER toward ROA. Although the cost efficiency is increased, the reality is the banks less in effective use of their funds. The extra funds due to cost efficiency that should be allocated on financing are used to cover loss. Because of that, the cost efficiency has less effect on attempt to increasing the financing. The result is have similierity with the researchs by Ichwan (2016) which is stated that OER has no significant effect on FDR. It also followed of researchs by Yuliana (2007), Nurkhosidah (2009) and Dewi (2010) which is concluded the FDR variable has no significant effect on ROA.

i. The effect of CAR toward ROA with mediation of NOM

The result of the ninth hypothesis shows the NOM variable can not mediate the effect of CAR toward ROA. According to the research by Puspitasari (2014:1639), the large amount of funding does not exactly make a bank's profit. A high CAR ratio due to tendency of sharia banks which are classified as risk averse, that they tend to distribute the fund to parties with no risk such as placements of funds at BI or goverment bonds. The fund that is not distributed to financing sector will reduce the opportunities to obtain more profit. Finally, the capital adequacy does not affect to the profitabilities. The result is have similierity with the research by Puspitasari (2014) which is stated that CAR has no significant effect on NOM. It also followed of researchs by Widyawati (2017) and Tristiningtyas (2013) which is concluded the NOM variable has no significant effect on ROA.

j. The effect of NPF toward ROA with mediation of NOM

The result of the tenth hypothesis shows the NOM variable can not mediate the effect of NPF toward ROA. The NPF ratio has small number that has less effect to the profitability. The bad financing can still be resolved without having to rearrange the financial revenue structure to cover these losses. The result is have similierity with the researchs by Putri (2016), Puspitasari (2014) and Kusumaningrum (2016) which is stated that NPL/NPF has no significant effect on NOM. It also followed of researchs by Widyawati (2017) and Tristiningtyas (2013) which is concluded the NOM variable has no significant effect on ROA.

k. The effect of OER toward ROA with mediation of NOM

The result of the eleventh hypothesis shows the NOM variable can not mediate the effect of OER toward ROA. The high cost efficiency should make the bank gain more funds by saving its costs and increasing the revenue. Currently the bank is prioritize to distribute its funds to the non-risk financing. It makes the bank's income become stagnant or in another word is no increased. When a decrease OER ratio does not followed by the ability to maximize revenue, the efficiency of performance can not influence to amount of income received by the bank. The result is have similierity with the research by Purba (2018) which is stated that OER has no significant effect on NIM. It also followed of researchs by Widyawati (2017) and Tristiningtyas (2013) which is concluded the NOM variable has no significant effect on ROA.

Conclusion

Based on the analysis result, it can be concluded the CAR and NOM variables has a positive but it is not significant againt ROA. The NPF and FDR variables has also a negative not significant effect againt ROA. While the OER variable has a negative and significant effect againt ROA. By using path analysis, the FDR and NOM variables can not mediate the effect of CAR, NPF and OER variable toward ROA.

Suggestions for further research are suggested to add more the observation data period and more variant from other variables. Considered to the result of R-Squared, the intervening variables has only value of 15% and 36% that can be explained.

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