

## Influence of Financial Risk to The Profitability of Sharia Banking In Indonesia

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**Abstract—** This research aims to deeply analyze the impact of CAR risk, NPF risk, BOPO risk, FDR risk and ROE risk to profitability. The profitability indicator is ROA variable. Quantitative data types in the form of monthly time-series data From The Financial Ratio Report of Sharia Commercial Bank and Sharia Business Unit published by Sharia Banking Directorate, Bank Indonesia and the Bank Licensing and Banking Information Department, Indonesia Financial Services Authority through Sharia Banking Statistics Bank Indonesia/Indonesia Financial Services Authority from January 2006 to January 2018. The results showed: (1) A regression model on the independent variable simultaneously affects the dependent variable, so that the independent variable regression model can be used to predict the dependent variable; and (2) The CAR variable and FDR variable influential positive and significant toward ROA variable; NPF variable influential negative and significant toward ROA variable; BOPO variable influential negative and insignificant toward ROA variable; ROE variable influential positive and insignificant toward ROA variable.

**Keywords:** Sharia banking, financial risk, profitability

### 1. INTRODUCTION

In order to keep banking activities exist and continue to provide benefits, every bank management must maintain the health of the bank from time to time which means the bank is obliged to be assessed in health every period. This bank's health assessment is also done for Sharia Bank both Sharia Commercial Bank and Sharia Rural Bank. This is done in accordance with the development of a dynamic bank condition assessment methodology that encourages the re-arrangement of the bank's health-level assessment system based on sharia principles.

In the bank's health-level assessment, sharia banks have incorporated risks inherent in bank activities that are part of the risk management assessment process[1] because banking management principles should pay attention to bank health issues. The bank must maintain the bank's level of health, such as capital adequacy, asset quality, quality management, liquidity, ability, solvency and other aspects related to the bank's business and must conduct business activities in accordance with the principle of prudence[2]. Therefore, with sufficient capital of course allows the bank in every exercise his practice is not experiencing difficulties and losses that may arise, resulting in the rise of the profitability level of the bank[3]. Sufficient capital adequacy ratio demonstrates the

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banking ability in preparing the funds that are later used to address the possible risk of loss arising.

Bank Indonesia, in determining the health level of a bank is concerned with the assessment of Return on Assets than Return on Equity. That is why, Bank Indonesia prioritizes the profitability value of a bank that is measured by assets whose funds are partly derived from community saving funds, so that ROA is more representative in measuring the profitability of banking[4]. Other things, the bank's health level can be assessed from several indicators. One of the indicators that made the basis of valuation is the bank's financial statement. Based on the report will be able to calculate a number of financial ratio that are commonly used as reference to bank health level assessment. financial ratio analysis also allows management to identify fundamental changes in the trend of the number and relationship and reason for the change. Certainly the results of the analysis of financial statements will help to interpret the various key relationships as well as tendencies that can provide a basis of consideration of the potential success of the bank in the future[5].

Various factors that can affect the profitability of the bank should give a message to the management of Sharia Bank in order to consistently maintain internal banking conditions, especially those involving health indicators of banks. In addition, the management of Sharia Bank also needs to continuously monitor the macroeconomic situation so that the business decisions taken can protect the interests of the parties and the funds of the sharia banking fund users in Indonesia[6]. Thus, banking, especially sharia banking, is required to be able to adapt to the environment through the implementation of risk management in accordance with sharia principles. The principles of risk management applied to sharia banking in Indonesia have certainly been directed in line with the standard rules issued by the Islamic Financial Services Board (IFSB). The implementation of risk management in sharia banking has also been adapted to the size and complexity of the bank and the capabilities of banks. Bank Indonesia also establishes this risk management rules as a minimum standard that must be fulfilled by Sharia Bank and Sharia Business Unit, so that sharia banking can develop it according to the needs and challenges faced. However, it's done healthily, consistently and in accordance with Sharia Principles.

## **2. SHARIA BANKING INDONESIA**

Pursuant to article 1 number 2 of the Law Number 10 year 1998 concerning banking that "The Bank is a business entity that raise funds from the community in the form of deposits and channel it to the community in the form of credit and or other forms of to improve the lives of many people". It's proof that financial institutions are one of the main pillars for the development of national economies that drive the wheels of the country economy. While in law Number 21 year 2008 concerning Sharia Banking, "Sharia Bank is a bank that conducts its business activities based on Sharia Principles and is according to the type consisting of Sharia Commercial Bank and Sharia Rural Bank". As meant by "Sharia Banking is everything related to Sharia Banks and Sharia Business Unit, covering institutional, business activities and ways and processes in conducting its business activities".

This means that Sharia Bank and Sharia Business Unit are obliged to implement good governance and include principles of transparency, accountability, professional and fairness in carrying out its business activities[7], so as to minimize risk.

## **3. FINANCIAL RATIOS ANALYSIS**

The analysis of financial ratios is a technique of financial analysis to determine the relationship between specific posts in the balance sheet or income statement either individually or simultaneously[8] or the analysis of the financial ratio is the index linking

two accounting figures and obtained by dividing one digit by another number. This ratio is used to evaluate the financial condition and performance of the bank[9].

#### **4. CAPITAL ADEQUACY RATIO (CAR)**

The CAR ratio is part of the capital as the instrument of the ability of the bank to build community confidence, so that the bank can withdraw depositor funds. CAR also shows how much bank assets that contain risks, such as financing, inclusion, securities and bills on other banks can be financed from their own capital in addition to funding from sources outside the bank[10].

#### **5. NON PERFORMING FINANCING (NPF)**

The NPF ratios to measure the bank's management ability to manage problematic financing provided by banks. The risk of financing received by the bank is one of the risks of the bank's efforts resulting from uncertainty in its return or resulting from the unrepaid financing provided by the bank to the customer[11]. Of course and certainly in every running a full-fledged banking business, sharia banks are also not separated from the risk of problematic financing so the Sharia Bank needs to set a strategy, so that the level of NPFnya isn't in a condition worrying about[12].

#### **6. RATIO OF OPERATIONAL EXPENSES TO OPERATIONAL REVENUE (BOPO)**

The Ratio of operational expenses to operational revenue called BOPO is the ratio used to measure the level of efficiency and ability of the bank to perform its operations[13] or BOPO is the ratio of operating costs to 12 Last month of operating income in the same period[14].

#### **7. FINANCING TO DEPOSIT RATIO (FDR)**

The FDR ratio is the ratio for measuring the bank's liquidity from a comparison of the financing provided with the funds received[15].

#### **8. RETURN ON EQUITY (ROE)**

The ROE ratio is the profitability ratio comparing the company's net profit to its net assets (equity or capital). This ratio measures how much profit is generated by the company compared to the stake paid by shareholders[16] which shows the extent to which the company manages its own capital effectively, measuring the profit level from investments that have been done by own capital owner or company shareholder[17] or ROE is the ratio annualized earnings after taxes to average equity.

#### **9. RETURN ON ASSETS (ROA)**

The ROA ratio also called Net Earning Power Ratio (Rate of Return On Investment/ROI) is the ability of the invested capital in total assets to produce net profit[18] or ROA is the ratio of annualized earnings before taxes to average assets.

#### **10. PROFITABILITY**

The bank's profitability is the ratio used to measure the bank's ability to generate profit from normal business activities[19]. There are two ratios that are often used to measure the profitability ratio of banks, namely with Return on Assets (ROA) and or Return on Equity (ROE).

## 11. RESEARCH MODEL

The population of research authors get from the Financial Ratios Report of Sharia Commercial Bank and Sharia Business Unit published by the Directorate of Sharia Banking, Bank Indonesia and the Bank Licensing and Banking Information Department, Indonesia Financial Services Authority through Sharia Banking Statistics Bank Indonesia/Indonesia Financial Services Authority through its official website at [www.bi.go.id](http://www.bi.go.id). and [www.ojk.go.id](http://www.ojk.go.id). The secondary data is the monthly time-series data period of January 2006 to January 2018 whose calculation is assisted by the Statistical Product and Service Solutions (SPSS) program, thus obtained a sample of 145 data. In this study, authors used quantitative data.

## 12. RESULTS AND DISCUSSION

### 12.1 TEST THE PRECISE LOCATION OF THE DETERMINATION COEFFICIENT OF R SQUARE

The R Square coefficient of determination ( $R^2$ ) is used to measure the proportion of the variations dependent variable described by the independent variable. Essentially coefficient of determination measures how far the ability of the model in describing variations dependent variable. From Table 1 below, the R value is 0,783 as a double correlation value which means the independent variable has a relation to the relationship with the dependent variable. While the value of R Square is 0,614 representing the value of coefficient of determination. This means that 61,40% of the ROA variable variation is capable of being described by the independent variable in this model. The remaining 38,60% is explained by other reasons that do not fit into the model.

**Table 1. Result of R Square  
Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.783 <sup>a</sup>	.614	.600	.36277

a. Predictors: (Constant), CAR, NPF, BOPO, FDR, ROE

b. Dependent Variable: ROA

**Source: Processed Secondary Data.**

### 12.2 TEST F

Test F (Fisher) is also called the test of the Analysis of Variants (ANOVA) is used to see the effect of independent variable on a dependent variable simultaneously. This F-test aims to identify whether a regression line can be used as an estimator.

**Table 2. F Test Result  
ANOVA<sup>a</sup>**

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	29.038	5	5.808	44.130	.000 <sup>b</sup>
Residual	18.293	139	.132		
Total	47.331	144			

a. Dependent Variable: ROA

b. Predictors: (Constant), CAR, NPF, BOPO, FDR, ROE

**Source: Processed Secondary Data.**

The analysis and conclusions of Table 2 above are  $H_0$  unacceptable (rejected) and  $H_a$  acceptable (can't be rejected). Because, F value of 44,130 is greater than the F table of 2,28 and the value of Sig. 0,000 smaller than 0,05. This means the regression model on the independent variable simultaneously affects the dependent variables, so that the independent variable regression model can be used to predict the dependent variable.

### 12.3 TEST t

The t test is used to see the effect of independent variable partially against its dependent variable and aims to identify whether the regression coefficient of a independent variable affects significantly against dependent variable.

**Table 3. t Test Result Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-1.937	.668		-2.901	.004
CAR	.015	.006	.131	2.473	.015
NPF	-.199	.035	-.388	-5.765	.000
BOPO	-.007	.005	-.101	-1.475	.143
FDR	.046	.005	.541	9.846	.000
ROE	.023	.019	.063	1.171	.244

a. Dependent Variable: ROA

**Source: Processed Secondary Data.**

The analysis and conclusions of Table 3 as below:

- The CAR variable has a calculated t value of 2,473 larger than the t table of 1,980 or the Sig. value 0,015 is smaller than 0,05 which means  $H_0$  is unacceptable (rejected) and  $H_a$  acceptable (cannot be rejected). Thus, it can be concluded that the CAR variable has a positive and significant effect on the ROA variable.
- The NPF variable has a calculated t value of 5,765 larger than t table of 1,980 or a Sig. value 0,000 smaller than 0,05 which means  $H_0$  is unacceptable (rejected) and  $H_a$  acceptable (cannot be rejected). From the relationship direction, the NPF variable has a negative relationship direction to the ROA variable. Thus, it can be concluded that the NPF variables negatively and significantly affect the ROA variable.
- The BOPO variable has a calculated t value of 1,475 larger than t table of 1,980 or a Sig. value of 0,143 is greater than 0,05 which means  $H_0$  is acceptable (cannot be rejected) and  $H_a$  unacceptable (rejected). From the relationship direction, the BOPO variable has a negative relationship direction against the ROA variable. Thus, it can be concluded that BOPO variables negatively affect and are not significant to the ROA variable.
- The FDR variable has a calculated t value of 9,846 greater than t table 1,980 or a Sig. value 0,000 smaller than 0,05 which means  $H_0$  is unacceptable (rejected) and  $H_a$  acceptable (cannot be rejected). Thus, it can be concluded that the FDR variable is positively and significantly affected to the ROA variable.
- The ROE variable has a calculated t value of 1,171 smaller than t table 1,980 or the Sig. value 0,244 greater than 0,05 which means  $H_0$  is acceptable (cannot be rejected).

rejected) and  $H_a$  unacceptable (rejected). Thus, it can be concluded that the ROE variable has a positive and insignificant effect on the ROA variable.

### 13. ECONOMIC SIGNIFICANCE TEST

By looking at the results of the t test, the interpretation of these multiple linear regression equations is:

$$ROA = -1,94 + 0,015CAR - 0,199NPF - 0,007BOPO + 0,046FDR + 0,023ROE$$

- a. The -1,94 constants indicate if the CAR variable, NPF variable, BOPO variable, FDR variable and ROE variable are constant, then the ROA variable of -1,94 which means sharia banking suffered a loss of 1,94%. In the face of challenges to increase competitiveness of sharia banking business, there are some fundamental issues mainly related to strengthening and harmonising the vision and coordination between government and authority in the framework of industrial development Sharia banking are more coordinated and synergized. Sharia banking began to be recognized in its existence at the time of the issuance of Law Number 7 year 1992 about the bank applying the concept to the outcome. The development is the government's alignments through Bank Indonesia and the Indonesia Financial Services Authority to pay more attention to sharia banking because it is like a child, sharia banking is the second child who needs growth and support. There needs to be a concerted effort to find a way out, such as drafting individual Sharia banking laws. It is very important that sharia banking can demonstrate its own trademark of conventional banking.
- b. The CAR variable, which is the capital adequacy ratio, is intended to cover unexpected loss and as a reserve in the event of a banking crisis. The number in the CAR variable regression coefficient of 0,015 gives the meaning that with the increase of capital adequacy of 1% will increase the profit by 0,015%. With a high capital adequacy, Sharia banking can freely put its funds into profitable investments and the possibility of the development of Sharia banking is better. This indicates that the capital adequacy aspect of Sharia banking is still sufficient to support the expansion of Sharia banking business with the appropriate records of *ceteris paribus*. The results of this study support Yuliani (2007), Pupik Damayanti and Dhian Andanarini Minar Savitri (2012), Sham Ur Rahman (2012), Nurul Rahmi and Ratna Anggraini (2013), Sri Windarti Mokoagow and Misbach Fuady (2015), Endang Fitriana and Hening Widi Oetomo (2016) and Astohar (2016).
- c. The NPF variable, which is the ratio that demonstrates the ability of a bank to manage problematic financing that has been channeled by sharia banking. The risk of financing received by sharia banking is a risk caused by the uncertainty of the retrieval or not repaid financing provided by Sharia banking. The number in the NPF variable regression coefficient of -0,199 gives the meaning that the reduced NPF has an effect on increasing sharia banking opportunities to benefit from the financing given, thereby affecting profit and positive effect on the Islamic banking ROA. The importance of financing for Sharia banking makes sharia banking always developing its financing management in order to maximize the profit received by sharia banking, including hitting the risk of problem financing. If the NPF increases or in other words more problematic financing, it will cause a decrease in Sharia banking capital. Likewise, if the problem financing is reduced by 1%, the ROA will increase by 0,199%. This signifies sharia banking is able to increase and generate profit with the corresponding record of *ceteris paribus*. The results of this study support Tan Sau Eng (2013), Septiarini and Ramantha (2014), Anggreni and Suardhika (2014), Sari Ayu Widowati and Bambang Suryono (2015), Luh Eprima Dewi et al. (2015), Heri Susanto and Nur Kholis (2016) and Nur Janah and Pani Akhiruddin Siregar (2018).



- d. The BOPO variable, the operating cost to the operating income, is the ratio used to measure the level of efficiency and ability of sharia banking in its operational activities. The number in the BOPO variable regression coefficient of -0,007 gives the meaning that a reduced operating cost of 1% will increase the profit before tax which eventually raises the Sharia banking ROA. This means that any reduction of the 0,007% ratio that measures the efficiency and effectiveness of the operational Sharia banking in controlling the operational costs of operating income resulted in more efficient operational costs Sharia banking. If the value of BOPO is smaller, then the more efficient Sharia banking conducts its activities in the use of reduced resources with the appropriate records *ceteris paribus*. The results of this study support Kartika Wahyu Sukarno and Muhammad Syaichu (2006), Muhammad Sabir M. et al. (2012), Luh Putu Eka Oktaviantari and Ni Luh Putu Wiagustini (2013), Fitri Zulfiah and John Susilowibowo (2014), Ningsukma Hakim and Haqiqi Rafsanjani (2016), Nelly Octaviany (2016) and Fadrul and Hasbi Asyari (2018).
- e. The FDR variable is the ratio between the amount of financing provided by sharia banking and the funds received by Sharia banking. The FDR expressed the magnitude of Sharia banking capability in paying back the withdrawal of funds deposited by relying on financing provided as a source of liquidity. FDR is also an indicator to know the insecurity of a bank in assessing the liquidity factor. The difficulty of liquidity management due to bank managed funds is largely a community fund that is short-term and can be withdrawn at any time. The number in the FDR variable regression coefficient of 0,046 gives the meaning that the FDR gives a positive impact on the ROA level by 1%. Therefore, the greater the financing of the income gained by sharia banking rises. With an increase in revenues, the profit will be automatically increased, so that from the various financing is expected to increase a sharia banking of 0,046%. The big FDR ratio of course funds channeled to depositor funds is also great. With large depositor funds channeling, Islamic banking revenues against ROA have increased positive impact on ROA. If the higher the FDR ratio, the higher the funds are channeled to the depositor funds, so that the increased FDR can increase the Islamic banking ROA with the corresponding record *ceteris paribus*. The results of this study support Bahtiar Usman (2003), Pandu Mahardian (2008), Rima Yunita (2014), Iwan Fakhrudin and Tri Purwanti (2015), Retno Wulandari and Atina Shofawati (2017), Yusriani (2018) and Yudhistira Ardana (2018).
- f. The ROE variable, the ratio of measuring the sharia banking management capability in existing capital management, is to get the net profit income before tax. This ratio shows the company's ability to generate profit after deducting expenses including taxes using the company's own capital. Because, the ratio of ROE aims to know the efficiency of management in implementing its capital and ultimately investor confidence in the capital invested in the company better and can positively influence the price of its stock in the market and growing ROA company. The number in the ROE variable regression coefficient of 0,023 gives the meaning that the repayment rate is getting higher by 1% because the investor considers the company has good prospects in raising ROA by 0,023% with the appropriate record *ceteris paribus*. The results of this study support Noer Sasongko and Nilai Wulandari (2006), Asep Alipudin and Resi Oktaviani (2016), Mila Ayu Cahyani et al. (2017) and Martina Rut Utami and Arif Darmawan (2018).

## 14. CONCLUSION

A regression model on the independent variable simultaneously affects the dependent variable, so that the independent variable regression model can be used to predict the dependent variable; and the CAR variable and FDR variable influential positive and significant toward ROA variable; NPF variable influential negative and significant

toward ROA variable; BOPO variable influential negative and insignificant toward ROA variable; ROE variable influential positive and insignificant toward ROA variable.

Risk management is required to identify, measure and control a wide range of risks. Therefore, the application of risk management in banking, especially sharia banking is very important to create a strong infrastructure because the financial crisis that hit the bank can create economic crises in the country, such as crisis that happened in our country, Indonesia, in the year 1997-1998 then. The world financial crisis that took place in year 2008 further confirms the need for consistent implementation of risk management. Thus, the increase in financial risk faced by sharia banking in Indonesia needs to be balanced with the quality of adequate risk management application because it will be very related to the bank's interests and customers interests.

## 15. RECOMMENDATIONS

There must be a policy and ask the Bank Indonesia and the Indonesian Financial Services Authority to provide freedom or compensation to sharia banking, especially financial risks associated with the requirements of the Capital Adequacy Ratio (CAR) valuation criteria, Non Performing Financing (NPF), Ratio of Operational Expenses to Operational Revenue (BOPO), Financing to Deposit Ratio (FDR), Return On Equity (ROE), Return On Assets (ROA) and drafting the sharia banking law itself. It's very important that sharia banking can shows its own trademark of conventional banking. sharia banking began to be recognized in its existence at the time of the issuance of Law Number 7 year 1992 about the bank applying the concept to the profit sharing. Although it's not clearly mentioned about the sharia principle. Since then, Bank Muamalat which is the first Sharia Bank started operating in Indonesia. The existence of sharia banking is increasingly strong when it was Passed Law Number 10 year 1998 as Amendment of Act Number 7 year 1992. In this updated law it's clearly stated that the Commercial Bank and the Rural Bank are operating conventionally and/or based on Sharia Principles. Then, in the year 2008 was passed Law Number 21 year 2008 about sharia banking. Regulation Number 21 year 2008 is used today. In other practice, the development of sharia banking system in Indonesia is done in the framework of dual-banking system.

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