

## REDUCING NON PERFORMING FINANCING THROUGH FINANCIAL RATIOS

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### *Abstract*

*The aim of this study is to investigate financial ratios in minimizing non performing financing (NPF) at Sharia Banks. The samples of this study were 11 Sharia Banks listed in Bank Indonesia in 2008-2018. The data were analyzed by using multiple linier regression analysis. The result of this study showed that CAR, QPA, and OEOI have a significant positive effect on NPF. Meanwhile, FDR variable has no significant negative effect on NPF. The results of this study are expected to provide information on the factors that can affect the NPF and how to control the NPF so that Sharia Banks can keep the ratio of NPF net to stay under 5%, this is to maintain the condition of the bank soundness level.*

*Keywords: financial ratios, non performing financing, sharia bank*

### **Introduction**

Bank collects funds from the society in the form of savings and distributes them in the form of credit and/or other forms, in order to improve the standard of living of many communities (Law No. 10 of 1998). Every credit given cannot be separated from the various risks that could threaten the bank soundness. Non-Performing Financing (NPF) is a measure of credit risk that becomes a bank soundness parameter. The Bank is deemed to have potential difficulties that jeopardize its business continuity if the Non-Performing Financing ratio is net of more than 5% of total loans (Bank Indonesia, 2013). If it exceeds 5% it will affect the rating of the bank soundness. The greater the level of NPF, the bank is not professional in its credit management, and also gives an indication that the level of risk on lending to

the bank is quite high in line with the high of NPF (Riyadi, et.al., 2015).

Although the average NPF ratio does not exceed 5%, it means it is relatively fluctuating. This indicates that NPF is vulnerable to unexpected changes. Therefore, an appropriate strategy is needed in controlling the NPF ratio so that the performance of Sharia Banks is much better so as to encourage investors interested in investing. One of the ways for controlling the NPF is by knowing the dominant factors affecting the NPF. Knowledge of factors influencing NPF is expected to be an input for Shariah Commercial Bank management in order to suppress high NPF, especially in conditions of economic crisis.

By knowing the NPF ratio of a bank, the public and Bank Indonesia can take wise steps in addressing and facing the bank. Increasing or decreasing the NPF ratio in a

bank can be influenced by various factors, either internal bank or macro. Quantitatively, the factors affecting NPF can be capital adequacy ratio (CAR), financing to deposit ratio (FDR), quality of productive assets (QPA), operating expenses to operating income (OEI), total financing/credit and profitability of banks. In addition, there are also other factors that cause the occurrence of problem loans, such as poor credit analysis process, failed products offered to customers, loans based on balance sheet strength not based on cash flow loans, banks take too much comfort in security, information asymmetry leads to moral hazard, economic environment and political influence (Chikoko, et.al., 2012; Hapsari, 2012). In macroeconomic terms, the main cause of high levels of NPF is the economic slowdown, which is seen from the statistically significant and economically significant coefficients on GDP, unemployment and inflation rate (Skarica, 2014).

### **Hyphotesis Development**

#### *Capital Adequacy Ratio and Non-Performing Financing*

The capital adequacy ratio (CAR) shows the adequacy of capital owned by banks to support risk-bearing assets, such as loans (Dendawijaya, 2009). The CAR is derived from the Risk Weighted Assets Ratio (Riyadi, et.al., 2015). The decrease in CAR is the result of decreasing the amount of bank capital or increasing the number of Risk-Weighted Assets. The results of the study (Sudiyatno and Suroso, 2010) revealed that CAR has a positive effect on NPF. Sri (2013) states the same thing that the higher the CAR will be the higher the NPF. In line with the finding of Vatansever and Hepsen (2015) that the CAR positively affects the NPF.

H1: Capital adequacy ratio positively affects non performing financing

#### *Financing to Deposit Ratio and Non Performing Financing*

The amount of credit disbursed can be known from the ratio of financing to deposit ratio (FDR) of a bank, because FDR is the ratio between the amounts of credit provided by the bank with the number of third-party funds received by the bank. This ratio indicates the ability of the bank to repay the withdrawal of funds by the depositor by relying on the credit given as a source of income. According to Bank Indonesia regulation, the maximum FDR allowed is 92%. Wiranatakusuma and Duasa (2017) found that financing to deposit ratio has been influenced the NPF. Husaeni (2016) found that variables of FDR have a significant positive to the financing. FDR is a factor to measure bank soundness in liquidity. FDR is also related to the distribution of financing because it can solve the short-term obligations, repay all depositors who took funds any time, and solve the credit proposed. These results are reinforced by the finding of Padmantyo (2011) that there is a significant positive relationship to nonperforming financing.

H2: Financing to deposit ratio has a positive effect on non performing financing

#### *Quality of Productive Assets and Non Performing Financing*

To know the probability of credit failure, it is necessary to know the quality of productive assets (QPA). QPA is the ratio between classified productive assets (CPA) to total productive assets. The CPA consists of credit in special attention, non-performing loans, doubtful credit, and non-performing financing (Riyadi, et.al., 2015). The increasing QPA ratio is influenced by increasing CPA or decreasing total productive assets. If CPA increases, it means that credit is in special interest, non-performing financing, doubtful credits, and bad debts also increase. Thus, if a high QPA

ratio means bad or problematic credit levels are also high. This is supported by research conducted (Jayanti and Haryanto, 2013) that QPA has a positive effect on NPF.

H3: Quality of productive assets has a positive effect on non performing financing

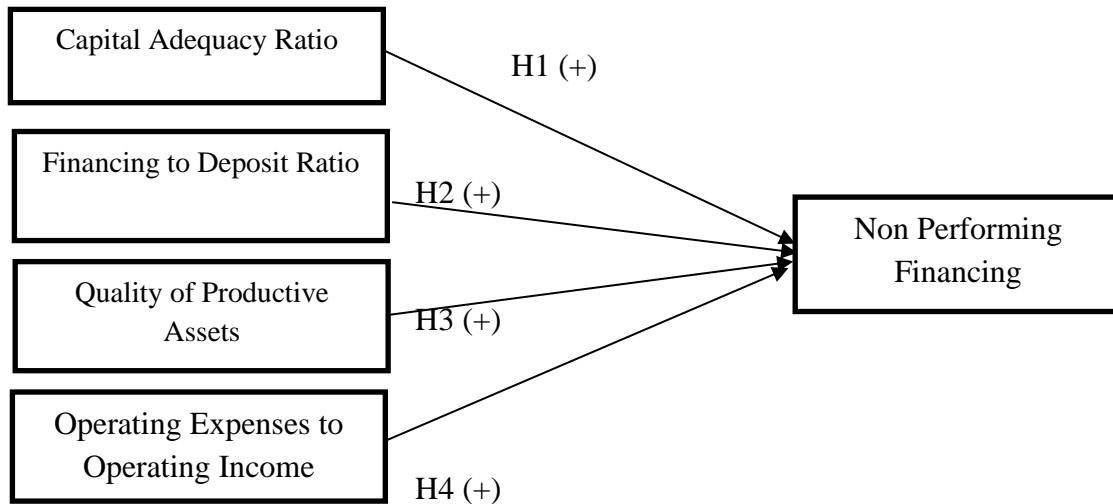
*Operating Expenses to Operating Income and Non Performing Financing*

OEOI is the ratio between Operational Cost and Operating Income (Riyadi, et.al., 2015). The OEOI ratio is called as the efficiency ratio used to measure the management capability of bank in controlling operational costs toward operating income in the operational activities. The amount of OEOI ratio that can be tolerated by banks in Indonesia is 93, 52%. According to Jayanti,

and Haryanto (2013), the possibility of default from the debtor may result additional charges for billing categorized as a loss. Research Sudiyatno and Suroso (2010) said that operational expenses to operating income (OEOI) are used to measure the efficiency and operational effectiveness of a company. The smaller the ratio of OEOI means the more efficient the operational costs incurred by the bank so that the possibility of banks in problem condition is getting smaller. This is in line with research conducted by Jayanti and Haryanto, 2013) that OEOI has a positive effect on NPF. While Vatansever & Hepsen (2015) has a negative effect on NPF.

H4: OEOI has a positive effect on non performing financing

**Figure 1: Research Model**



**RESEARCH METHOD**

This research used quantitative research by using 11 Sharia Banks at Bank Indonesia period 2008-2018 as the samples. The sampling technique used in this research is purposive sampling method, that is the technique of determining the sample with certain consideration or criterion (Sugiyono, 2013). By using purposive sampling method will make the researcher get samples in accordance, also be easy to do research. The

criteria used in the determination of the research sample include Sharia Bank at Bank Indonesia period 2008-2018, Sharia Banks at Bank Indonesia which in the financial statements there is a ratio required in the study period 2008-2018, Sharia Bank has positive assets and in the form of rupiah.

Capital is the main factor for a bank to be able to develop its business growth. The fulfillment of the Bank's Minimum Capital Ratio or known as CAR is determined by the

BIS (Bank for International Settlement) at 8%. The CAR ratio is obtained using the formula: (Capital: ATMR) x 100%. The FDR ratio is the liquidity ratio used to measure a bank's ability to meet short-term liabilities. FDR is measured by the ratio between total financing and total funds. The assessment of the Quality of Productive Assets ratio is based on a comparison between total earning assets classified divided by total earning assets multiplied by 100%. The OEOI ratio is used to determine how much the company's ability to manage operating expenses so as not to swell. OEOI can be calculated using total operating expenses divided by operating income multiplied by 100%. NPF can be defined as a loan that is experiencing repayment difficulties. NPF is calculated from the ratio of total non-performing financing (substandard credit, bad credit, and doubtful credit) divided by total credit multiplied by 100% (Kasmir, 2013).

Feasibility analysis of model in this research uses multiple linear regression analysis include regression coefficient test (t-test), model reliability test (F test) and coefficient of determination analysis (adjusted R2). T-test or partial significance test is used to determine the influence of independent variables partially to the dependent variable. While F test or

simultaneous test, is used to test the influence of independent variables to the dependent variable (Ghozali, 2013). Determination coefficient analysis is used to see the percentage of influence of independent variable to dependent variable. The coefficient of determination for regression with more than two independent variables is recommended to use adjusted R2. The model of this research is expressed as follows:

$$NPF = \alpha + \beta_1CAR + \beta_2FDR + \beta_3QPA + \beta_4OEOI + e$$

- information :  
 NPF : Non Performing Financing  
 α : Constanta  
 β1... β4 : Coeffisient Regression  
 CAR : Capital Adequacy Ratio  
 FDR : Financing to Deposit Ratio  
 QPA : Quality of Productive Assets  
 OEOI : Operating Expenses to Operating Income  
 e : error

## RESULT AND DISCUSSION

### Classic Assumption Test

A good regression model must fulfill the absence of classic assumption problem. The results of classic assumption test is presented in table 1.

**Table 1: The Results of Classic Assumption Test**

Dependent Variable	Independen t Variable	Normality Test		Multicollinearity Test		Heteroscedasticity Test (Glejzer Test)		Auto Correlation Test (Run Test)
		K-S	Sig	Tolerance	VIF	t	Sig	Sig
NPF	CAR	.261	.115	.815	1.776	1.279	.418	.229
	FDR			.822	1.765	1.211	.382	
	QPA			.859	1.791	1.002	.211	
	OEOI			.889	1.789	1.144	.575	

Table 1 shows the results of classic assumptions test for each variable.

Kolmogorov Smirnov value shows a figure of .261 with a significance value of .115, means

that the data is normally distributed. Muticollinearity test results showed that all variables have met the multicollinearity criteria with a tolerance value higher than the default standard value for 0.10 and the VIF value showed lower than 10. Therefore it can be said that all independent variables (CAR, FDR, QPA, and OEIO) of NPF the requirements. In other words, there is no multicollinearity problem between the independent variables to the dependent variable. Heteroscedasticity test results shows a significance value above 5%, it can be interpreted that the influence of

independent variables (CAR, FDR, QPA, and OEIO) on NPF do not occur heteroscedasticity problems. The autocorrelation test results shows that run test sig value of .229, this means that regression has no autocorrelation problem because the asym sig value is more than 5%.

### Multiple Linier Regression Analysis

The results of multiple linear regression analysis tests that include the f test results, coefficient of determination test results and t test results can be seen in table 2.

**Table 2: Multiple Linier Regression Test**

Dependent Variable: NPF				
Independent Variables	Coefficient	Std. Error	t-Statistic	Sig.
CAR	0.11760	0.12973	5.88345	0.000
FDR	-0.01615	-0.11648	-2.74840	0.263
QPA	0.42048	0.15456	8.49943	0.001
OEIO	0.14981	0.11498	5.75278	0.000
C	-0.51791	3.25469	-0.26688	0.716
Adjusted R-square	0.3228			
F-statistic	55.776			
Prob (F-statistic)	0.000			

Source: data (2020)

Regression equation of research data are:

$$\text{NPF} = -0.51791 + 0.11760 \text{ CAR} - 0.01615 \text{ FDR} + 0.42048 \text{ QPA} + 0.14981 \text{ OEIO}$$

Test results presented in table 2 adjusted R2 value of 0.3228. This indicates that the variation in the influence of Capital Adequacy Ratio (CAR), Financing to Deposit Ratio (FDR), Quality Of Productive Assets (QPA), Operating Expenses to Operating Income (OEIO), dan Non Performing Financing (NPF) only 32.28%. It means that this model is enough to explain the proportion of the influence of independent variables on the dependent variable NPF of 32.28% and

675.72% then the rest explained by other variables model of this study. Nevertheless, as known from the model feasibility test (F test), the model is still categorized as worthy to explain the effect of the independent variables on the dependent variable. This can be seen from the probability value of F arithmetic that is smaller than the error rate of 0.05. The t test show that the coefficient of CAR, FDR, QPA, and OEIO variables are 5.88345; -2.74840; 8.49943; and 5.75278 with a significant level equal to 0.000; 0.263; 0.001; and 0.000. Therefore, the CAR, QPA, and OEIO have positive effects to NPF. FDR has negative effects to NPF. Thus, the first,



third, and fourth hypothesis are accepted, but second hypothesis is rejected.

### **Capital Adequacy Ratio and Non Performing Financing**

Capital adequacy ratio projected by CAR has a significant positive effect on NPF projected bad credit. The higher the capital adequacy ratio, the more it will increase the NPF. Conversely, as lower as the capital adequacy ratio, will be as smaller as the NPF. This finding is supported by Vatansver & Hepsen (2015); Sudyatno and Suroso (2010) which revealed that CAR has a positive effect on NPF. Sri (2013) states the same thing that the higher the CAR will be the higher the NPF. Loan control can start from the control of the capital adequacy ratio. Sharia banks want to reduce their bad debts, by reducing their capital adequacy ratio. In contrast, the finding of Herijanto (2012) that the CAR has a negative influence on NPF. The same results are also stated by Maidalena (2014) that the greater the capital adequacy owned by a bank will not affect its NPF. Likewise the finding of Solihatun (2014) that the high CAR ratio will be smaller the ratio of NPF.

### **Financing to Deposit Ratio and Non Performing Financing**

The amount of financing to deposit ratio (FDR) has an insignificant negative effect on bad debts. It means that high and low FDR ratio does not affect NPF ratio Sharia Bank. This result is in line with Giannini (2013) stated that FDR has a negative influence on NPF. Strategy to increase FDR is to encourage lending. Increasing lending further decreases bad debts and opens opportunities to increase the percentage of financing to deposit ratio. The same results were also conducted by Wiranatakusuma and Duasa (2017) stated that financing to deposit ratio have been influenced by the NPF. In contrast to Husaeni (2016), the variables of FDR have a significant positive to the financing. This finding is in line with Padmanty (2011)

which found that there is a significant positive relationship with NPF.

### **Quality of Productive Assets and Non Performing Financing**

Quality of productive assets has a significant positive effect on NPF. It means, by improving the quality of productive assets will encourage an increase in NPF. The quality of earning assets is influenced by CPA and/or total productive assets. A decrease in CPA may be made if a Sharia Bank wants to suppress bad debts. Another thing that can be done is to improve the quality of productive assets. It is supported Jayanti and Haryanto (2013) that QPA has a positive effect on NPF. Similar to finding of Riyadi, et.al. (2015) stated that the quality of productive assets affects the NPF ratio.

### **Operating Expenses to Operating Income and Non Performing Financing**

The ability of bank management in controlling operational expenses to operational income in the operational activities has a significant positive effect on the decrease of bad debts. The more efficient the Sharia Bank in the operational activities, which is indicated by the smaller the value of OEI, the smaller the NPF of the Sharia Bank. This indicates the failure of Sharia Bank to streamline its operational activities will result in the growth of non-performing financing.

As presented by Jayanti and Haryanto (2013), the possibility of default from the debtor may incur additional costs for billing categorized as a loss. It means that OEI has a positive effect on NPF. This is also supported by Riyadi, et al., (2015) said that the smaller the ratio of OEI means the more efficient the operational expenses incurred by the bank so that the possibility of non-performing financing is getting smaller. OEI is used to measure the efficiency and operational effectiveness of a company. In contrast to the results of research conducted

by Vatansver & Hepsen (2015) stated that OEOI negatively affects the NPF.

## CONCLUSION

Based on the analysis and data processing above, it can be concluded that Capital Adequacy Ratio (CAR), Quality of Productive Assets (QPA), and Operating Expenses to Operating Income (OEOI) have a significant positive effect on NPF at Sharia Bank; Financing to Deposit Ratio (FDR) has no significant negative effect on NPF at Sharia Bank. The results of this study are expected to provide information on the factors that can affect the NPF and how to control the NPF so that Sharia Banks can keep the ratio of NPF net to stay under 5%, this is to maintain the condition of the bank soundness level. Furthermore, for investors who will invest their funds in the banking sector, in addition the factors that affect the NPF should also see other information contained in the bank statements to determine the condition of a bank, so it can be considered for investors to make decisions in choosing where bank that save the excess funds of investors or customers.

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