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Empirical Testing of Risk Management in Financial Performance in Indonesian Islamic Rural Bank

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ABSTRACT

The study aims to determine the effect of risk management that is proxied by operational risk, credit risk, and liquidity risk on financial performance in BPRS in Indonesia. The approach used a quantitative approach. This type of research was explanatory research that explained the causal relationship between the independent variables toward the dependent variable. This study used secondary data types taken from Islamic banks, especially the Islamic Rural Bank (BPRS) in Indonesia. This study's variables included independent risk management variables as measured by NPF and operational risk with BOPO. At the same time, the dependent variable was measured by ROA. The results showed that risk management proxied by financing risk or NPF and operational risk (BOPO) had a significant effect on financial performance. NPF had a significant negative effect on financial performance (ROA). BOPO had a significant effect on financial performance (ROA).

Keywords: risk management, operational risk, credit risk, liquidity risk and financial performance, Islamic rural banks

INTRODUCTION

The Islamic Rural Bank (BPRS) is a sharia financial institution that first obtained a business permit after the 1988 Pact on banking liberalization, which allowed new banks other than those already existing. BPRS is a driver of Islamic banking development in Indonesia, followed by the establishment of Bank Muamalat Indonesia. The enactment of Law Number 10 of 1998, an amendment to Law Number 7 of 1992, provides a stronger legal basis for the Islamic banking system's existence and the Islamic banking industry develops faster. In the period 1992 to 1998, there was one sharia public bank and 78 Islamic Rural Banks operating.

The development of BPRS in the last five years has increased. This shows that BPRS contributes to the Indonesian economy's growth and impacts economic progress, small scale economies. This condition is evidenced by the development of BPRS, Deposits (Third Party Funds), and profits in 2013-2019. The development of BPRS can be seen in the following figure 1.

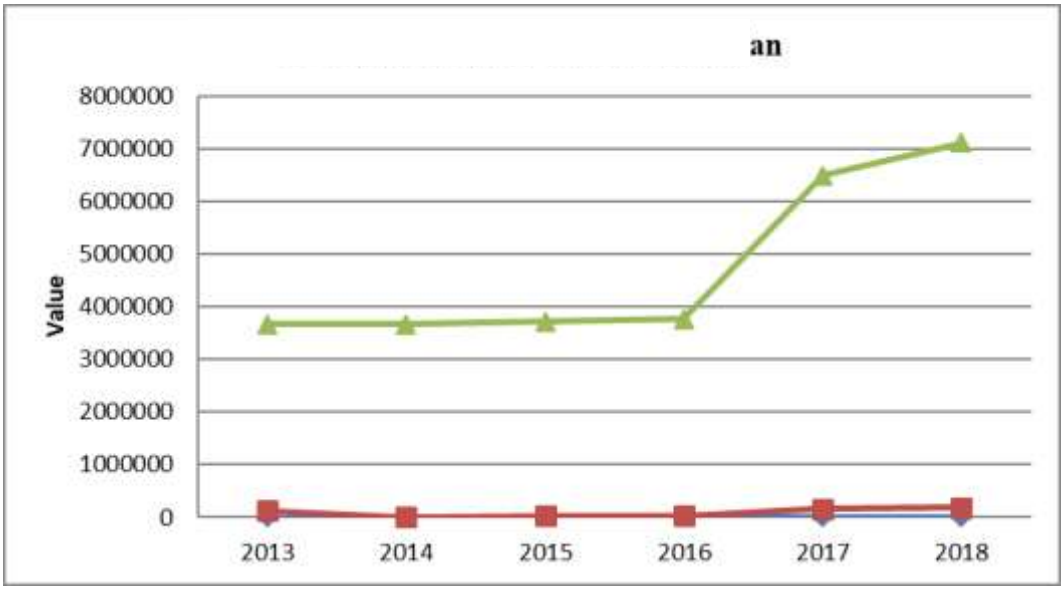

Figure 1. The Growth Value of BPRS

Figure 1 explains the Growth Value of BPRS during 2013-2016. BPRS, as one of the increasing Islamic financial institutions, provides an overview of opportunities and potential to continue to be developed. BPRS is an alternative to conventional financial institutions, especially on a small scale, in developing the real economy sector in financing micro, small and medium enterprises (MSMEs).

Related to the bank's financial performance, the ratio used to measure financial performance is the profitability ratio. One of the profitability ratios used for financial performance is ROA (Return on Assets). According to [1], intangible assets, financial policies, financial performance have a significant effect on firm value simultaneously. Intangible assets do not significantly influence financial policy but positively and significantly affect financial performance (ROA) and firm value. Debt policy and financial performance (ROA) affect firm value positively and significantly.

Islamic banks' business activities are always faced with risks closely related to their function as intermediary financial institutions. The increasingly rapid development of Islamic banking's external and internal environment has resulted in increasingly complex risks of sharia banking business activities. Therefore, Islamic banks must adapt to the environment regarding the application of risk management following sharia principles. The principles of risk management applied to Islamic banking in Indonesia are directed in line with the Islamic Financial Service Board (IFSB).

Risk management is critical to note because the pace of change in the industry has been running very fast in recent years. Competition in the quality, design, and cost of new products has increased with new, more competitive competitors. The need to effectively manage new product development is becoming increasingly urgent in the business climate. Thus, most businesses must deal with uncertainties in the risks and uncertainties in a performance expected in every aspect, both internal and external. The company needs to determine the possibility that something will go wrong as planned to keep the company from completing the project successfully, namely, by calculating risk management and performance systematically.

Research by [2] that banks in the United Arab Emirates, both national and foreign banks, chose inspection as one of the essentialrisk identification methods.According to [3], risk management is a series of procedures or methodologies used to identify, measure, monitor, and control risks arising from the bank's business activities. The application of risk management will provide better benefits to banks. For banks, risk management can increase shareholder value and provide an

overview to bank managers regarding the possibility of losses to the bank in the future. Improved methods and systematic decision-making processes, which are used as the basis for precise measurement of performance in the banking world. In addition, risk management was found to be one of the determinants of returns from bank shares [4].

The application of risk management to Islamic banking is adjusted to the size and complexity of the business and the bank's ability. Bank Indonesia stipulates this risk management rule as a minimum standard that must be met by the Islamic Commercial Bank (BUS) and Sharia Business Unit (UUS) so that Islamic banking can develop it according to the needs and challenges faced but still be carried out in a healthy, stable and appropriate manner with Sharia Principles. General provisions regarding the implementation of risk management of Islamic banking are contained in BI provisions Number 13/23 / PBI / 2011 dated 2 November 2011 concerning the application of risk management for BUS and UUS.

Risk management is expected to detect the maximum possible losses in the future as well as additional capital requirements if the impact of the projected loss can result in the amount of capital below the minimum provisions required by Bank Indonesia supervisory authorities. Assessment of risk profile factors is an assessment of inherent risk and the quality of risk management in bank operational activities. Risks that must be assessed consist of 8 types of risk: credit risk, market risk, operational risk, liquidity risk, legal risk, strategic risk, compliance risk, and reputation risk (Bank Indonesia: SEBI No. 13/24 / DPNP: 2011). Several indicators can be measured from these eight risks, such as credit risk, market risk, liquidity risk, and operational risk.

The profitability ratio used is Return on Assets (ROA), a ratio of pre-tax profit to total assets. The greater the ROA, the greater the profitability, which means that its performance is getting better. Some risks that affect profitability tend to come from a company's credit, operational, and liquidity.

The bank will suffer credit risk due to the non-repayment of the bank's credit given to the debtor. The ratio used in calculating credit risk is Non-Performing Finance (NPF), a ratio of total non-performing loans to total loans. Non-Performing Financing (NPF) and Operating Cost to Operating Income Ratio partially affect Return On Assets [5].Accordingto [6], NPF variables have no significant effect on ROA.Operational risk is a risk caused by a lack of internal bank processes, human errors, technological system failures, or external problems. Operational risk generally uses BOPO (Operational Expenses to Operating Income) as an indicator of research. BOPO shows the ability of bank management in controlling operational costs against operating income. Accordingto [6]indicate that the BOPO variable has a significant effect on ROA. In addition to credit risk and operational risk, liquidity risk is one factor that affects profitability.The purpose of this study is to determine the effect of risk management that is proxied by operational risk, credit risk, and liquidity risk on financial performance in BPRS in Indonesia.

LITERATURE REVIEW AND HYPOTHESIS

a. Risk Management in Banking

Smith [7] tried to measure risk by comparing the level of loss and planning for portfolio quality, a simple statistical tool using a risk index. Modigliani & Pogue [8] present two risk measures; The relative size is denoted by beta, and the standard deviation denotes the total risk measure. Depending on the monthly return rate between 1945 and 1970, they assign a beta measure to be more significant for security prices and predictable for large portfolios.

Risk management is the process of measuring or assessing risks and developing management strategies. Strategies can be taken, among others, transferring risk to other parties, avoiding risks, reducing the negative effects of risk and accommodating some or all of the consequences of certain risks. Traditional risk management focuses on risks arising from physical or legal causes (such as natural disasters, fires, deaths, and lawsuits). Financial risk management, on the other hand, focuses on risks that can be managed using financial instruments. The essence of risk management is the adequacy of risk management procedures and methodologies so that the bank's business

can be controlled at an acceptable limit or limit that benefits the bank.

Iqbal and Mirakhor [9], the risks faced by Islamic banking are grouped into four classifications: the first, financial risk that directly impacts the assets of a bank's liability. This financial risk itself is divided into credit risk, market risk, and investment equity risk (specifically for non-bank financing). Second, business risk, which is related to bank competition and bank success prospects in changing markets. Business risks include the risk of the rate of return and risk of withdrawal. Third, treasury risk includes risks originating from institutional financial resources management in terms of cash management, equity management, short-term liquidity management, and asset-liability management (MAL). Fourth, government risks include operational risk, transparency risk, sharia risk, and reputation risk.

b. Financial Performance

Profitability ratios explain the company's activity in generating maximum profit. For long-term investors, the profit ratio aims to see dividends [10]. ROA determines how effective management generates profits with total assets. ROA can be calculated through the comparison of income after tax with the company's total assets. A higher ROA percentage indicates that management is better at generating profits with total assets [11]. Performance appraisal is something significant in the era of global competition as it is today. One of the importance of measuring company performance is that the company's performance measurement is used by management to make decisions and evaluate the performance of related units in the company's organizational environment. The assessment provides an essential mechanism for management to explain objectives and performance standards to motivate individual performance in the future.

Financial performance is the result of operational activities that are presented in the form of financial numbers. The company's current activities must be compared with financial performance in the past, balance sheet budget, and profit and loss on similar companies' average financial performance. Financial performance is a work achievement that has been achieved by the company in a certain period and contained in the financial statements of the company concerned.

ROA is the ability of capital invested in all company assets to produce a profit. ROA using profit as one way to assess effectiveness in the use of company assets in generating profits. The higher the profit generated, the higher the ROA, which means that it is more effective in using assets to generate profits. ROA is calculated based on the ratio of profit before tax and average total assets. In this study, ROA is used as an indicator of the performance or bank performance. ROA shows the effectiveness of the company in generating profits by optimizing its assets. The higher the ROA, the more influential the company is because the ROA amount is influenced by the amount of profit the company makes. Performance information is beneficial for users of financial statements. Groups of investors, creditors, and the general public want their investments invested in banks to know their performance. Returns on capital investment are useful for management evaluation, profitability analysis, profit forecasting, and planning and control. The return rate on capital investment for this purpose requires an in-depth understanding of the size of this return because the size of returns includes components that can contribute to understanding company performance [12].

c. Effect of Risk Management on Financial Performance

According to Bank Indonesia Regulation No. 13/23 / PBI / 2011 concerning the application of risk management for Sharia Commercial Banks and Sharia Business Units, the risk is the potential loss resulting from a particular event. Meanwhile, the risk of loss that occurs as a direct or indirect consequence of the risk event the loss can be in the form of financial and non-financial. Islamic banking also can deal with these risks, except interest rate risk, because Islamic banking will not deal with interest [3].Operational risk in Islamic banks is significant and becoming more complicated than conventional banking because of the unique contractual features and general legal

environment. While basic Basel II core principles of adequate banking supervision apply equally well and ideally suit the Islamic banking institutions, risk measurement and risk management practices still need specific adaptations to Islamic banks' operational characteristics. These particularities highlight Islamic banks' unique characteristics and raise serious concerns regarding the applicability of the Basel II methodology for Islamic banks [13]. Concerning measuring operational risk capital charge, the banks have to choose the right and effective method to ensure the operational risk capital charge will be more in line with the banks' actual risk profile and provide adequate capital and an improved buffer once the losses are announced [13].

According to [14], to examine how Islamic financial institutions dealt with the recent financial problems in terms of risk management. Islamic banks are maintaining better capital ratios than their conventional counterparts.

While the research conducted by [15] conducted a study that showed the relationship between the effectiveness of risk management and company performance, the results of the research shown by [16] suggest that there is a positive and significant relationship between risk management and company performance. Furthermore, other researchers also suggested that companies' competitive advantage is a mediator in risk management's effectivenessin improving company performance [17].

Based on the description above, the researcher tried to formulate the hypothesis as follows:

H_1: NPF has a significant effect on the financial performance of BPRS in Indonesia

H_2: BOPO has a significant effect on the financial performance of BPRS in Indonesia.

RESEARCH METHODS

The approach used a quantitative approach. This type of research was explanatory research that explained the causal relationship between the independent variables to the dependent. This study used secondary data types taken from Islamic banks, especially the Islamic Rural Bank (BPRS) in Indonesia. The type of data used pooled data. The data used in the form of annual report data from Bank Indonesia. To obtain up-to-date data, annual banking report data from BI was taken from 2010-2015. Data is obtained from the Islamic Rural Bank (BPRS) annual report in Indonesia and the Bank Indonesia Directory and the financial services authority (www.ojk.go.id) or sample company bank sites.

The type of data used secondary data, from the results of second-party processing (external data). This research was an explanative study that describes the causal relationship between independent variables on the dependent variable.The sampling method used purposive sampling to select this research sample, then the sample taken in this study is the Islamic Rural Bank(BPRS) in Indonesia. The criteria for the Islamic Rural Bank(BPRS), which will be the sample in this study, are as follows:

a. The Islamic Rural Bank(BPRS) is registered with Bank Indonesia and the Financial Services Authority (OJK).
b. Islamic Rural Bank(BPRS), which has complete data based on the variables used for research from 2010 to 2015, presented in the financial statements of each sample of The Islamic Rural Bank(BPRS) sample that has been audited so that the data taken is likely will not change.

This study's variables include independent risk management variables as measured by NPF and operational risk with BOPO. At the same time, the dependent variable is measured by ROA. In this study, the types of data used in this study are secondary data and data pools. According to [18],secondary data is a source of research data obtained indirectly through intermediary media (obtained and recorded by other parties), generally, in the form of evidence, notes, or historical reports published. In comparison, the pooled data is a combination of cross-section data and time-series data. Cross Section data is data collected at a particular time on several objects to describe certain conditions. Time Series data are data collected at some time on objects to describe developments [18].

The analysis used in this study is the multiple regression analysis because there is more than one independent variable. To find out the intensity of the relationship between the dependent variable and the independent

variable, the regression model used can be formulated as follows:

$$\mathbf{Y = bo + b_1X_1 + b_2 X_2 + e}$$

Where:

Y = ROA

X_1 = NPF

X_2 = BOPO

Bo = intercept

b1 b2 = independent variable regression coefficient

e = disturbing variable

The multiple determination coefficient (R^2) can decrease if a new variable is added to the regression model (even though R^2 increases). However, the increase in R^2 does not mean that the new variable entered is statistically significant.

Partial testing (t-test), namely testing the regression coefficient individually by determining the statistical formula to be tested, the t-test as a test of each variable from a regression equation based on the value of tcount. The value of ttable obtains the significance level (α) of 5% of df = n-k-1. The value of ttable is compared with the value of tcount obtained by comparing the two t values; then, the effect can be accepted or rejected by the hypothesis. Testing criteria include a) $t_{count} > t_{table}$ Ho is rejected, and Ha is accepted, meaning that there is an influence between the independent variables on variable bound to the degree of confidence used at α = 5%; b) $t_{count} > t_{table}$Ho is accepted, and Ha is rejected, meaning that there is no influence between the independent variables on variable bound to the degree of confidence used at α = 5%.

RESULT

Before testing the relationship between variables, it is essential to present data that describes the bank's financial condition. The data presented are processed data based on time series data and cross-section for the past six years.Non-Performing Financing (NPF) is one of the risks that always arise in the banking world from external and internal factors. External factors come from outside the bank (bank control), while internal factors come from the bank. The following are data on NPF development in Islamic Rural Banks in Indonesia from January 2010 to June 2015 in Figure 2.

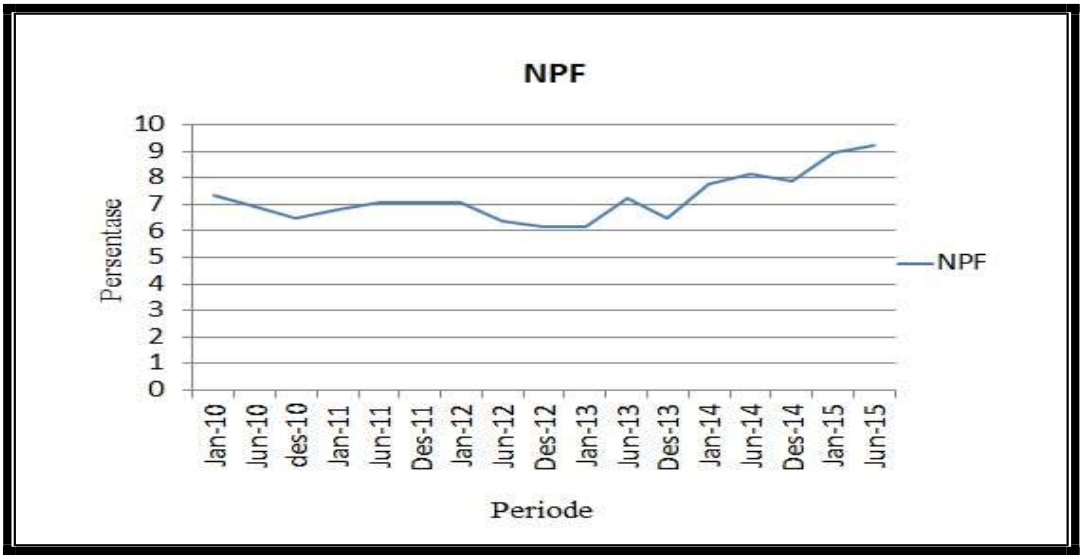

Figure 2. Development of NPF of Islamic RuralBanks (BPRS) in Indonesia Period 2010-2015

Based on Figure 2, it can be concluded that the NPF reached its highest point of 7.36% in January 2010, then continued to experience fluctuating developments until January 2012; NPF experienced a reasonably good decline with the lowest point of 6.15% in January 2013, then tended to increase as of June 2015 reached a value of 9.25%. The higher the NPF value of a bank can reflect the bank's lousy quality that causes the number of non-performing loans to be more significant, the greater the likelihood of a bank in problematic conditions. For the next period, Islamic banks are expected to be more careful in selecting prospective customers who will be given financing

The Operational Cost Ratio to Operating Income (BOPO) compares operating costs and operating income. The operational cost ratio is used to measure the efficiency and ability of banks to carry out their operations. Return on Assets (ROA) is one indicator that measures the health or failure in utilizing assets owned to generate profits. Quality assets will certainly support Islamic banking's performance in generating profits for the sustainability of banking performance in subsequent periods. An overview of the development of ROA from the period 2010 to 2015 in Figure 3 below.

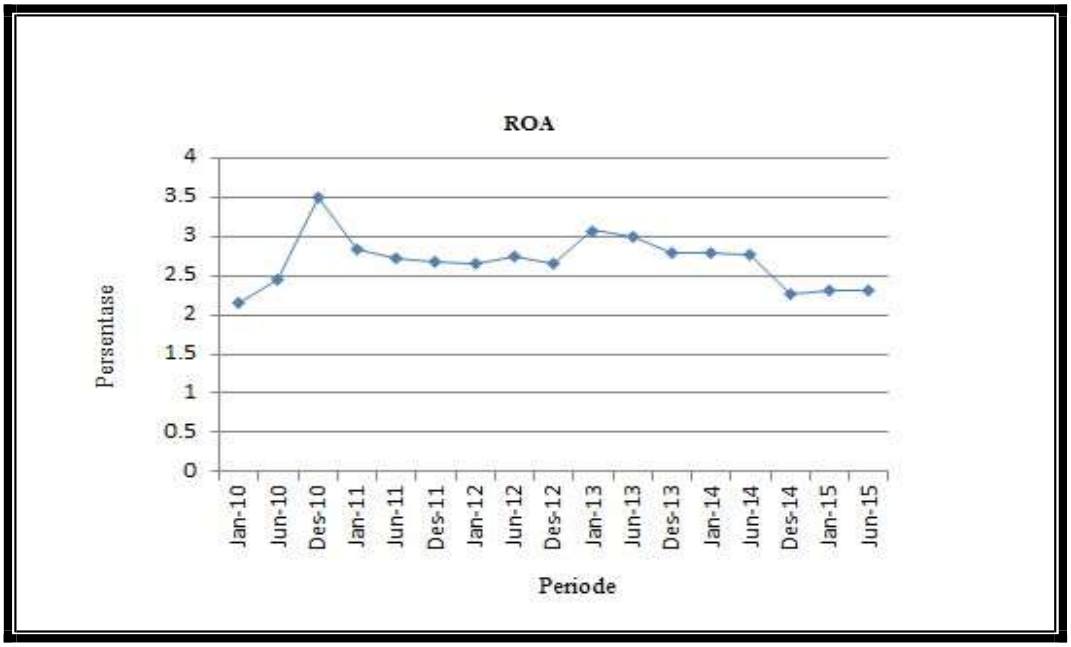

Figure 3. Development of ROA for Islamic Rural Banks (BPRS) in Indonesia for the 2010-2015 period

Based on Figure 3, it can be concluded that ROA reached its highest point of 3.49% in December 2010, then continued to fluctuate until January 2013, and in January 2014, ROA decreased from 2 78% to June 2015 2.30%.The results of the normality test that the variables NPF (X1), BOPO (X2), and ROA (Y) are typically distributed. The Kolmogorov Smirnov Test calculation results have shown normal distribution on all variables (significance value> 0.05). The multicollinearity test results show no multicollinearity between independent variables because the VIF value is less than 5, meaning that there is no perfect linear relationship between several or all independent variables. The hetoakedasticity test results show that the distribution of data does not form a specific or random line. This means that the independent variables do not form heteroscedasticity.

Based on the results of Durbin Watson, the figure is 1,895. This shows that according to

the criteria for the number D-W below -2 to +2, it means that there is no autocorrelation. It means the multiple linear regression model used is free from autocorrelation. Based on these results, the magnitude of the direct effect and the effect of total NPF and BOPO as independent variables on ROA (Y) as the dependent variable is known. Multiple linear regression results and hypothesis testing are explained in Table 1 below.

Table 1. Value of Path Coefficients and Hypothesis Testing

Hypothesis	Variable Independent	Variable Dependent	Beta (β)	t-value	ρ-value
1	NPF	Y1	-0,266	-4,193	0,024
2	BOPO	Y1	0,344	2,308	0,001

Note : ** = Significant pada α = 5%

The test results on the hypothesis proposed in this study were obtained based on testing the path coefficients in the multiple linear regression model in Table 1 Testing the hypothesis seen from the p-value of each path. If the p-value is smaller than 0.05, then the relationship between variables is significant. Conversely, if the p-value is greater than 0.05, the relationship between variables is not significant. The results of hypothesis testing are explained as follows:

The first hypothesis testing is seen from the beta coefficient (β) of -0.266 with the ρ-value of 0.024. One hypothesis is proven to be accepted because the ρ-value is <α or 0.024 <0.05. This shows that NPF's hypothesis has a negative and significant effect on financial performance (ROA), then $H_1$is accepted.

Testing the effect of BOPO on financial performance (ROA) is indicated by the beta coefficient (β) of 0.344 with a ρ-value of 0.001. Because the ρ-value is <α or 0.001 <0.005, then H_2 is accepted. Thus the hypothesis that BOPO has a significant effect on financial performance (ROA) is accepted.

RESULT AND DISCUSSION

The hypothesis testing results indicate that the simultaneous application of risk management (financing and operations) affects financial performance (ROA). This indicates that banks have succeeded in applying risk management. The success of the BPRS in implementing risk management affects its financial performance, indicated by the value of ROA. The positive value indicated by ROA means that the SRB can generate profits in its operational activities. It places the bank in a good ranking based on the criteria in the assessment of banking soundness.

The magnitude of the effect of the rate of credit repayment on banking performance requires the active supervision of the board of commissioners and directors in terms of the separation of duties between the function of analyzing the credit application, the credit approver, and the credit reviewer. In distributing credit, banks must also analyze the ability of debtors to fulfill obligations. Banks must conduct reviews, assessments, and collateral binding to minimize credit risk or default on debtors.

According to [14] to examine how Islamic financial institutions dealt with the recent financial problems in terms of risk management. Islamic banks are maintaining better capital ratios than their conventional counterparts.

The study results are consistent with [15], which shows the relationship between risk management and company performance effectiveness. Jafari [16] stated a positive and significant relationship between risk management and company performance.

CONCLUSION AND RECOMMENDATION

The study results can be concluded that risk management proxied by financing risk or NPF and operational risk (BOPO) affects financial performance. NPF has a negative and significant effect on financial performance (ROA). BOPO has a significant effect on financial performance (ROA).

Based on the study results, then there are several suggestions that the authors can propose: a) For Islamic Rural Banks (BPRS), the banking world cannot be separated from the name of bad credit, but this can be minimized. BPRS should be more stringent in carrying out the 5C principles before giving credit. BPRS should always maintain the level of capital so that it will improve the financial performance of the BPRS; b) For Research Next it is expected to be able to examine the variables outside of this variable to obtain more varied results that can describe what things can affect Return on Assets (ROA) and for Customers, should the community or fund depositors follow the development of the soundness of the BPRS. Choose BPRS with a healthy financial ratio such as CAR above 8% and avoid BPRS whose capital ratio continues to decline and avoid BPRS that have non-performing loans or NPF above 5.

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