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Factors Affecting Financial Sustainability Ratio of Sharia Rural Banks in Java Island, 2013-2018

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ABSTRACT

This study aims to determine the influence of factors that influence the financial sustainability ratio (FSR) of Sharia Rural Banks (BPRS) on the island of Java in 2013-2018. The variables used in this study are financial sustainability ratio (FSR), non-performing financing (NPF), return on assets (ROA), financing debt ratio (FDR), operational expenses and capital adequacy ratio (BOPO) and capital adequacy ratio (CAR). The samples selected in this study were 23 BPRS most complete out 91 BPRS on the island of Java with a range of research from 2013 to 2018, where the samples were published by the annual financial statements at Bank Indonesia (BI) or at the Financial Services Authority (OJK). Analysis of the data used is panel data regression with the Fixed Effect method using the eviews 9 program tool. In the test results that the CAR variable partially has a significant positive effect on the Financial Sustainability Ratio (FSR) while the BOPO variable partially has a significant negative effect on the Financial Sustainability Ratio (FSR). Based on the results of the BPRS Amanah Sejahtera has the highest FSR value of 6,647.5167, while the lowest FSR value is the Attaqwa SRB of 138,5008.

Keywords: Financial Sustainability Ratio; Sharia Rural Bank; Non Performing Finance; Return on Asset; Financing to Debt Ratio; Operational Efficiency Ratio; Capital Adequacy Ratio

INTRODUCTION

Banks are financial institutions authorized to collect, distribute, and provide services to the public in the form of savings, capital loans, and banking services to improve the standard of living of the community. Sharia Rural Banks or Bank Pembiayaan Rakyat Syariah abbreviated BPRS in Bahasa Indonesia is a financial institution in the form of a bank with operational systems based on Sharia principles, whose business activities do not provide payment traffic services (Fauzi, 2018). BPRS receives special attention through regulations issued by the Financial Services Authority (OJK), such as Financial Services Authority Regulation Number 03/POJK.03/2016 which states that the existence of BPRS is designated to provide banking services that are easy, simple, always hold cautionary principles, and are able to consistently apply Sharia principles, so that BPRS is able to provide the best services to the community, especially medium, small and micro entrepreneurs in rural and urban areas who have not been reached by general banking services. Micro, Small and Medium Enterprises (MSMEs) are one of the business actors that have a significant contribution in creating jobs in Indonesia. The important role of MSMEs in community life is as a means to earn income and develop their potential or skills (Maryati, 2014).

The development of BPRS in Java Island as of March 2018 shows that the number of BPRS in West Java and East Java is the same, but in terms of assets, financing and third-party funds, they are very different, with West Java having the highest asset value among other provinces in Java Island at 3,377,008 (in million rupiah), while in East Java, it is only half of that, which is 1,870,229 (in million rupiah). Financing in West Java

is also high at 2,580,328 (in million rupiah), which is far from financing in East Java at 1,359,293 (in million rupiah). This reflects the climate in West Java which has a very high micro fund needs compared to other provinces in Java Island. In terms of third-party funds which are smaller compared to financing, it will affect the bank's liquidity ratio (Financial Services Authority, 2018).

The performance of BPRS in Java Island shows a very good figure, indicating that with the ability of BPRS in Java Island, it can provide maximum contributions by providing working capital for small and medium enterprises (MSMEs). This achievement is supported by the ability of BPRS to reach the community from the lower-middle economic class, who have not been reached by Islamic or conventional Commercial Banks. For a BPRS to be able to obtain high profits, it must conduct efforts or activities that support the level of growth of the BPRS, meaning that a Bank Pembiayaan Rakyat Syariah or Islamic bank is said to be effective or efficient if it can maintain its performance well and can reduce the level of risk that will occur in the future (Almilia et al., 2009).

The financial performance of a bank, especially the Financial Sustainability Ratio (FSR), is essential for evaluating its sustainability in the future. The Financial Sustainability Ratio is an institution that compares all costs to the total revenue received from its activities. The standard component ratio for a good financial sustainability ratio should be above 100%. To achieve a high Financial Sustainability Ratio, total financial revenue must be higher than financial burden, meaning that if the FSR shows a higher number, then a bank can be said to be able to continue its operational activities (Santoso, 2017).

The research conducted by Notoatmojo et al. (2016) shows that the factors that positively influence the Financial Sustainability Ratio in Islamic Banks in Indonesia from 2010-2014 are the variables of CAR, ROA, and FDR, while the variables of NPL, ROE, and BOPO have a significant negative impact on the Financial Sustainability Ratio of Islamic Banks in

Indonesia. On the other hand, the research by Murwati and Yulianti (2015) shows that the ROA variable has a significant positive effect on the sustainability report, while the SIZE and EPS variables have a significant negative impact on the sustainability report. Meanwhile, the current ratio variable has no effect on the sustainability report.

Almilia et al. (2009) show that during the period before the 1995-1996 crisis, the LDR variable had a significant negative impact on the financial sustainability ratio, meaning that the higher the value of LDR, the lower the liquidity of the bank (the amount of funds needed to finance loans become more significant). This worsens the bank's ability to continue its operations. During the crisis period from 1997-1999, the NPL variable had a significant negative impact on FSR, while the ROA variable had a significant positive impact on FSR.

According to the research by Santoso et al. (2017), the factors that influence the Financial Sustainability Ratio are the CAR, NPL, and LDR variables, which have a significant effect, while the NPL variable has no significant impact on the Financial Sustainability Ratio of Private and National Commercial Banks listed on the Indonesia Stock Exchange (BEI) from 2011-2015. Meanwhile, according to Ayuningtyas et al. (2018), their research on the Sustainability of Islamic People's Financing Banks (BPRS) in Central Java shows that CAR has a positive partial effect on the Financial Sustainability Ratio, while BOPO has a negative partial effect on the Financial Sustainability Ratio. Based on the test results, BRPS Gunung Slamet has the highest FSR value at 3.32%, while BPRS Saka Dana Mulia has the lowest FSR value at 2.36%.

To create a strong and robust BPRS in Java, it is necessary to support significant asset growth, so that optimal Islamic product services can be provided to SMEs or the middle class, which will have an impact on increasing public confidence in Islamic People's Financing Banks through low Non-Performing Financing (NPF), maintaining a good Return on Assets (ROA), Financing Deposit Ratio (FDR), Capital Adequacy Ratio

(CAR), and Operational Expenses to Operational Income Ratio (BOPO). Therefore, this study will discuss the factors that influence the Financial Sustainability Ratio (FSR) of BPRS in Java Island from 2013-2018.

RESEARCH METHODS

The population of this study is all BPRS in Java Island, namely DKI Jakarta, West Java, Central Java, East Java, D.I Yogyakarta, and Banten provinces that are registered in Bank Indonesia and have complete annual financial ratio reports. Sampling or data collection in this study was done using purposive random sampling method, which is a sampling technique where the researcher randomly selects samples from the population of BPRS that have published financial reports for every semester by Bank Indonesia and Financial Services Authority during the years 2013-2018. The research objects used for this study are described in Table 1.

Table 1. Research Objects

No	Province	Regency	BPRS Name
1	DKI Jakarta	Wil. Kota Jakarta Selatan	PT BPRS Cempaka Al Amin
			PT BPRS Al ihsan
		Kab. Bandung	PT BPRS Al Mo'soem Syariah
			PT BPRS Harta Insan Karimah Parahyangan
2	Jawa Barat	Kab. Bekasi	PT BPRS Harta Insan Karimah Cibitung
			PT BPRS Amanah Insani
		Kab. Cianjur	PT BPRS Artha Madani
			PT BPRS Artha Fisabilillah
3	Jawa Tengah	Kab. Cilacap	PT BPRS Suriyah
		Kab. Semarang	PT BPRS Artha Amanah Ummat
		Kab. Kendal	PT BPRS Asad Alif
		Kab. Pati	PT BPRS Artha Mas Abadi

No	Province	Regency	BPRS Name
		Kab. Kudus	PT BPRS Saka Dana Mulia
		Kab. Banyumas	PT BPRS Bina Amanah Satria
		Kab. Purbalingga	PT BPRS Buana Mitra Perwira
		Kab. Magelang	PT BPRS Meru Sankara
		Kota Semarang	PT BPRS Artha Surya Barokah
		4	Jawa Timur
Kab. Sidoarjo	PT BPRS Unawi Barokah		
Kab. Jombang	PT BPRS Lantabur Tebuireng		
Kab. Pamekasan	PT BPRS Sarana Prima Mandiri		
Kab. Malang	PT BPRS Bhakti Haji		
6	Banten	Kab. Tangerang	PT BPRS Attaqwa

Source: Bank Indonesia and Financial Services Authority, 2013-2018

The data used in this study is secondary data in the form of semi-annual reports from 2013 to 2018. The data was obtained from the annual financial reports of BPRS at www.bi.go.id and www.ojk.go.id, with a cross-sectional sample consisting of 23 BPRS in Java Island taken from several provinces, with a research period from 2013 to 2018. The variables used in this study are independent variables, namely Financial Sustainability Ratio (FSR), while the dependent variables are Non-Performing Financing (NPF), Return On Asset (ROA), Financing Debt Ratio (FDR), Operational Expenses to Operating Income (BOPO), and Capital Adequacy Ratio (CAR). Data analysis is the process of simplifying data into an easily interpretable form. This study uses an econometric model for panel data. The modeling in linear regression is as follows:

$$Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e_{it} \dots\dots\dots (1)$$

Explanation:

Y_i = Financial Sustainability Rasio

- β_0 = Constant
- $\beta_1, \beta_2, \beta_3, \beta_4$ = Independent Variables Coefficients
- X_1 = Non Performing Financing (NPF)
- X_2 = Financing Debt Ratio (FDR)
- X_3 = Return On Asset (ROA)
- X_4 = Operational Efficiency Ratio (BOPO)
- X_5 = Capital Adequacy Ratio (CAR)

Data yang terkumpul dinilai dan diuji berdasarkan pada analisis variabel yang dinyatakan dengan jelas dan menggunakan rumus-rumus yang pasti. Regresi Panel data adalah regresi yang menggunakan panel data yang merupakan kombinasi diantara data lintas waktu dan lintas individu. Penggunaan data panel data dalam penelitian ini memiliki berbagai kelebihan dibandingkan dengan data time series atau cross section.

$$Y_i = \beta_0 + \beta_1 X_i + \mu_i ; i = 1, 2, \dots, N \dots\dots\dots (2)$$

Where N in the number of cross section data. While estimation model with time series is provided below:

$$Y_t = \beta_0 + \beta_1 X_t + \mu_t ; t = 1, 2, \dots, T \dots\dots\dots (3)$$

Where T number of time series data. Since panel data is combination of time series and cross section, the model can arranged as follow:

$$Y_{it} = \beta_0 + \beta_1 X_{it} + \mu_{it} \dots\dots\dots (4)$$

$i = 1, 2, \dots, N ; t = 1, 2, \dots, T$

Where:

- N = Observation
- T = Time
- N x T = Number of panel data

The data collected is evaluated and tested based on the analysis of variables that are clearly stated and using certain formulas. Panel data regression is a regression that uses panel data which is a combination of cross-sectional and time-series data. The use of panel data in this study

has various advantages compared to time-series or cross-sectional data. There are three approaches in panel data model analysis (Sriyana, 2014), namely:

1. The common effects approach assumes that the intercept and slope are constant over time and individuals, and differences in intercept and slope are assumed to be explained by disturbance variables. The formula for the common effect model is as follows:

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + e_{it} \dots \dots \dots (5)$$

2. The fixed effects approach assumes that consistent intercept and slope are difficult to meet. To overcome this, dummy variables can be inserted to allow for differences in parameter values that are different both across units and over time. The Fixed Effects Approach model is as follows:

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 D_{1it} + \beta_5 D_{2it} + \beta_6 D_{3it} + \dots + e_{it} (6)$$

Where: D_1 = for value A

D_2 = for value B

D_3 = for value C

D_4 = for value D

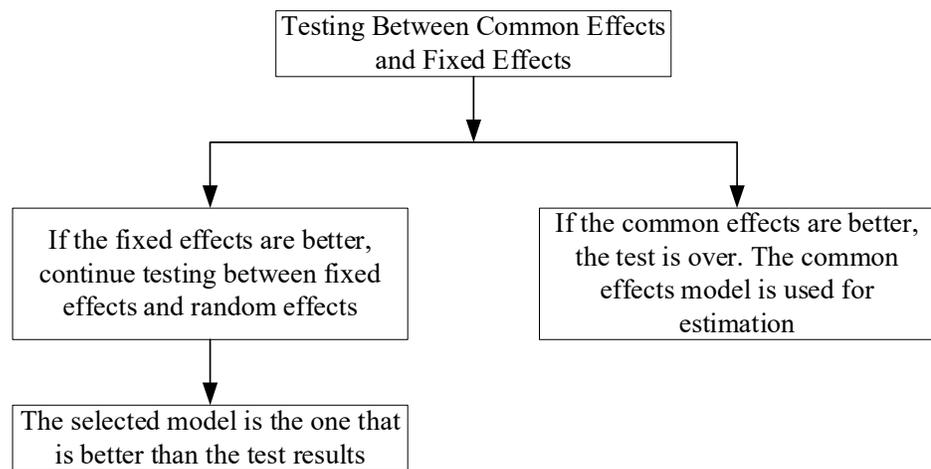
3. The random effect approach considers that the decision to include dummy variables in the fixed effect model will reduce the degrees of freedom, which will ultimately reduce the efficiency of the estimated parameters. The formula for the random effects approach is as follows:

$$Y_{it} = \beta_{0i} + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + e_{it} \dots \dots \dots (7)$$

Model selection in data processing

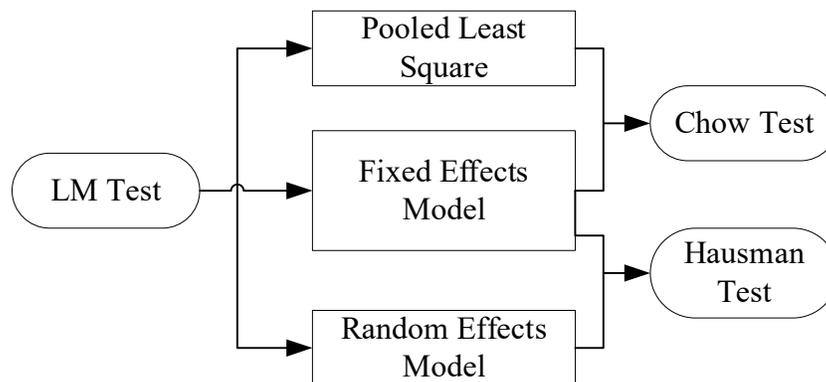
Model selection that will be used in the study needs to be done to determine whether the model is suitable or good for use in research or not. The following are good methods for model selection in data processing:

Figure 1. Procedure for Testing Model Selection Common Effects, Fixed Effects, Random Effects



Sumber: Sriyana (2014)

Figure 2. Testing the Selection of Common Effects Models, Fixed Effects and Random Effects



Source: Baltagi (2005)

Chow Test

The Chow test is a test used to determine the appropriate model for a research study between the common effect estimation model and the fixed effect estimation model. This test is the initial stage to select which model is suitable for the study. If the P-value chi-square < 0.05 (significance value), then H_0 is rejected, meaning that the fixed effect model is the appropriate model to use. Conversely, if the P-value chi-square > 0.05 (significance value), then H_0 is accepted, indicating that the common effect model is the appropriate model to use (Widarjono, 2017).

Hausman Test

The Hausman test is used to select the appropriate model between the fixed effect estimation model and the random effect estimation model. This test is conducted when the Chow test (initial stage) indicates that the fixed effect model is suitable, so it is necessary to perform the second stage of testing, which is the Hausman test with a hypothesis test. If the P-value < 0.05 , then H_0 is rejected, indicating that the fixed effect model is the appropriate model to use. Conversely, if the P-value > 0.05 , then H_0 is accepted, meaning that the random effect model is the appropriate model to use.

Hypothesis Testing

The t-test is conducted to determine whether the independent variable has a partial effect on the dependent variable or not. If the probability value of the t-statistic > 0.05 , then H_0 is accepted, indicating that the independent variable has no effect on the dependent variable. Conversely, if the probability value < 0.05 , then H_0 is rejected, indicating that the independent variable has an effect on the dependent variable.

The F-test is used to determine whether the independent variables have a simultaneous effect on the dependent variable. If the probability value of the F-statistic > 0.05 , then H_0 is accepted, indicating that the independent variables have no simultaneous effect on the dependent variable. Conversely, if the probability value of the F-statistic < 0.05 , then H_0 is rejected, indicating that the independent variables have a simultaneous effect on the dependent variable.

According to Nachrowi & Usman (2006), the coefficient of determination (Goodness of Fit) is an important measure in regression because it can inform whether the estimated regression model is good or not. In other words, the coefficient of determination can measure how close the estimated regression line is to the actual data. This value reflects how much variation in the dependent variable can be explained by the

independent variable. If the coefficient of determination is equal to 0, it means that the variation cannot be explained at all.

RESULTS AND DISCUSSION

This study aims to determine the factors that influence the financial sustainability ratio (FSR) of BPRS in Java Island from 2013 to 2018 with quarterly data. Based on the estimation technique, a regression model with panel data can be estimated using three estimation methods, namely Common Effects, Fixed Effect, and Random Effect.

Selection of Common Effects and Fixed Effect Estimation Models

Table 2. Fixed Effects Tests (Chow Test)

Redundant Fixed Effects Tests			
Pool: BPRS			
Test cross-section fixed effects			
Effects Test	Statistic	d.f.	Prob.
Cross-section F	7.025075	(22,524)	0.0000
Cross-section Chi-square	142.674833	22	0.0000

Source: Primary data (2019).

Based on the results in Table 2, the P-value Chi Square is 0.0000, indicating that the profitability value is < 0.05 , thus rejecting H_0 , which means that the appropriate estimation model to use is fixed effects. As the fixed effects model was selected, the next step is to conduct a Hausman test. The Hausman test is used to determine the appropriate model to use. It is also used to choose between the random effects estimation model. This test is conducted when the results of the Chow test (initial stage) indicate that fixed effect is the appropriate model, thus requiring a second testing stage, which is the Hausman test.

Selection of Fixed Effects and Random Effect Estimation Models

Table 3. Correlated Random Effects Test (Hausman Test)

Correlated Random Effects - Hausman Test			
Pool: BPRS			
Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.

Cross-section random 15.536903 5 0.0083

Source: Primary data (2019).

Table 3 shows that the P-value Chi Square is 0.0083, which means that the profitability value is < 0.05 , and H_0 is rejected, indicating that the good estimation model to be used is the Fixed Effects model. Therefore, the Fixed Effects model is the appropriate model and a good estimation model for this research.

Identification of Panel Data Regression Equation Estimation Results

Table 4. Panel Data Regression Results using the Fixed Effect Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
NPF?	-0.640645	0.164953	-3.883798	0.0001
FDR?	-0.000888	0.007174	-0.123737	0.9016
ROA?	0.036412	0.136047	0.267639	0.7891
BOPO?	-1.041996	0.114486	-9.101549	0.0000
CAR?	-0.102626	0.150070	-0.683855	0.4944
C	265.2767	7.680182	34.54042	0.0000

Effects Specification

Cross-section fixed (dummy variables)	
R-squared	0.500313
F-statistic	19.43173
Prob(F-statistic)	0.000000

Source: Primary data (2019).

Table 4 shows panel data regression results using the fixed effect model. While fixed effect estimation model is as follows:

$$Y = a + bx_1 + bx_2 + bx_3 + bx_4 + bx_5 \text{ where,}$$

$$Y \text{ FSR} = 265.2767 - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} - 1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

The panel data estimation results using fixed effect method in Table 4 show that the BOPO variable has a negative effect on Financial Sustainability Ratio (FSR) by 0.000, which is less than the α value of 5%. This means that if BOPO decreases by 1%, FSR will increase. A smaller BOPO can be interpreted as the company being more efficient in the use of its funds, which will have an impact on the sustainability of the company, in this case, the BPRS in Java island.

Based on Table 3, the Capital Adequacy Ratio (CAR) variable also has an effect on FSR by 0.4944, which is less than the α value of 5%. This means that a larger CAR will push FSR higher, because if CAR increases, it will have a positive impact on the sustainability of a company, in this case, the BPRS in Java island. The F-test in Table 4 shows a significant influence with a probability value of 0.0000, which is less than the α value of 5%. This means that all independent variables (NPF, FDR, ROA, BOPO, and CAR) simultaneously affect the Financial Sustainability Ratio. The performance of the model is also quite good, with an R^2 value of 44.46%.

Table 5. Constant Value for Each BPRS on the island of Java

BPRS	Intercept
BPRS Attaqwa	-1.267759
BPRS Cempaka Al Amin	-0.160082
BPRS Al Ihsan	-38.60868
BPRS Al Ma'soem Syari'ah	-8.227037
BPRS Asad Alif	0.200367
BPRS Bina Amanah Satria	-37.01387
BPRS Artha Mas Abadi	-32.08419
BPRS Suriyah	61.34509
BPRS Saka Dana Mulia	-36.92786
BPRS Artha Surya Barokah	-4.234212
BPRS Buana Mitra Perwira	-23.34992
BPRS Meru Sankara	-28.83194
BPRS Artha Amanah Ummat	8.996507
BPRS Amanah Sejahtera	63.82340
BPRS Unawi Barokah	5.904976
BPRS Bhakti Haji	-44.98001
BPRS Lantabur Tebuireng	21.84175

BPRS	Intercept
BPRS Sarana Prima Mandiri	-30.88539
BPRS Amanah Insani	-32.58875
BPRS Artha Madani	19.71088
BPRS Harta Insan Karimah Cibitung	56.40996
BPRS Artha Fisabilillah	35.81787
BPRS Harta Insan Karimah Parahyangan	45.10890

Source: Primary data (2019).

Based on Table 5, the estimated value for the effect of FSR for each BPRS is as follows: -126.7759 percent for BPRS Attaqwa, -16.0082 percent for BPRS Cempaka Al Amin, -3,860.868 percent for BPRS Al Ihsan, -822.7037 percent for BPRS Al Ma'soem Syari'ah, 20.0367 for BPRS Asad Alif, -3,701.387 for BPRS Bina Amanah Satria, -3,208.419 for BPRS Artha Mas Abadi, 6,134.509 for BPRS Suriyah, -3,692.786 for BPRS Saka Dana Mulia, -423.4212 percent for BPRS Artha Surya Barokah, -2,334.992 percent for BPRS Buana Mitra Perwira, -2,883.194 percent for BPRS Meru Sankara, 899.6507 percent for BPRS Artha Amanah Ummat, 6,382.34 percent for BPRS Amanah Sejahtera, 590.4976 percent for BPRS Unawi Barokah, -4,498.001 percent for BPRS Bhakti Haji, 2,184.175 percent for BPRS Lantabur Tebuireng, -3,088.539 for BPRS Sarana Prima Mandiri, -3,258.875 for BPRS Amanah Insani, 1,971.088 for BPRS Artha Madani, 5,640.996 for BPRS Harta Insan Karimah Cibitung, 3,581.787 for BPRS Artha Fisabilillah, and 4,510.89 for BPRS Harta Insan Karimah Parahyangan. The equation for each company, considering Cross Effects, is as follows:

1. Equation for BPRS Attaqwa

$$FSR_t = (-126.7759 + 265.2767) - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} - 1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

$$FSR = \mathbf{138.5008} - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} - 1.041996 \text{ BOPO} - 0.102626 \text{ CAR}.$$

2. Equation for BPRS Cempaka Al Amin

$$FSR_t = (-16.0082 + 265.2767) - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} - 1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

$$FSR = \mathbf{249.2685} - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} - 1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

3. Equation for BPRS Al Ihsan

$$FSR_t = (-3,860.868 + 265.2767) - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} - 1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

$$FSR = \mathbf{-3,595.5913} - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} - 1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

4. Equation for BPRS Al Ma'soem Syari'ah

$$FSR_t = (-882.7037 + 265.2767) - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} - 1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

$$FSR = \mathbf{-617.427} - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} - 1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

5. Equation for BPRS Asad Alif

$$FSR_t = (20.0367 + 265.2767) - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} - 1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

$$FSR = \mathbf{285.5134} - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} - 1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

6. Equation for BPRS Bina Amanah Satria

$$FSR_t = (-3,701.387 + 265.2767) - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} - 1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

$$FSR = \mathbf{-3,436.1103} - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} - 1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

7. Equation for BPRS Artha Mas Abadi

$$FSR_t = (-3,208.419 + 265.2767) - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} - 1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

$$FSR = \mathbf{-2,943.1423} - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} - 1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

8. Equation for BPRS Suriyah

$$FSR_t = (6,134.509 + 265.2767) - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} - 1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

$$\text{FSR} = \mathbf{6,399.7857} - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} \\ -1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

9. Equation for BPRS Saka Dana Mulia

$$\text{FSR}_t = (-3,692.786 + 265.2767) - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + \\ 0.036412 \text{ ROA} -1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

$$\text{FSR} = \mathbf{-3,427.5093} - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} \\ -1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

10. Equation for BPRS Artha Surya Barokah

$$\text{FSR}_t = (-423.4212 + 265.2767) - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + \\ 0.036412 \text{ ROA} -1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

$$\text{FSR} = \mathbf{-158.1445} - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} \\ -1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

11. Equation for BPRS Buana Mitra Perwira

$$\text{FSR}_t = (-2,334.992 + 265.2767) - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + \\ 0.036412 \text{ ROA} -1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

$$\text{FSR} = \mathbf{-2,069.7153} - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} \\ -1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

12. Equation for BPRS Meru Sankara

$$\text{FSR}_t = (-2,883.194 + 265.2767) - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + \\ 0.036412 \text{ ROA} -1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

$$\text{FSR} = \mathbf{-2,617.9173} - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} \\ -1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

13. Equation for BPRS Artha Amanah Ummat

$$\text{FSR}_t = (899.6507 + 265.2767) - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + \\ 0.036412 \text{ ROA} -1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

$$\text{FSR} = \mathbf{1,164.9274} - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} \\ -1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

14. Equation for BPRS Amanah Sejahtera

$$\text{FSR}_t = (6,382.34 + 265.2767) - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + \\ 0.036412 \text{ ROA} -1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

$$\text{FSR} = \mathbf{6,647.5167} - \text{NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} -1.041996 \\ \text{BOPO} - 0.102626 \text{ CAR}$$

15. Equation for BPRS Unawi Barokah

$$FSR_t = (590.4976 + 265.2767) - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} - 1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

$$FSR = \mathbf{855.7743} - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} - 1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

16. Equation for BPRS Bhakti Haji

$$FSR_t = (-4,498.001 + 265.2767) - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} - 1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

$$FSR = \mathbf{-4,232.7243} - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} - 1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

17. Equation for BPRS Lantabur Tebuireng

$$FSR_t = (2,184.175 + 265.2767) - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} - 1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

$$FSR = \mathbf{2,449.4517} - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} - 1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

18. Equation for BPRS Sarana Prima Mandiri

$$FSR_t = (-3,088.539 + 265.2767) - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} - 1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

$$FSR = \mathbf{3,353.8157} - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} - 1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

19. Equation for BPRS Amanah Insani

$$FSR_t = (-3,258.875 + 265.2767) - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} - 1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

$$FSR = \mathbf{-2,993.5983} - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} - 1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

20. Equation for BPRS Artha Madani

$$FSR_t = (1,971.088 + 265.2767) - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} - 1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

$$FSR = \mathbf{2,236.3647} - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} - 1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

21. Equation for BPRS Harta Insan Karimah Cibitung

$$FSR_t = (5,640.996 + 265.2767) - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} - 1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

$$FSR = \mathbf{5,906.2727} - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} - 1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

22. Equation for BPRS Artha Fisabilillah

$$FSR_t = (3,581.787 + 265.2767) - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} - 1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

$$FSR = \mathbf{3,847.0637} - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} - 1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

23. Equation for BPRS Harta Insan Karimah Parahyangan

$$FSR_t = (4,510.89 + 265.2767) - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} - 1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

$$FSR = \mathbf{4,776.1667} - 0.640645 \text{ NPF} - 0.000888 \text{ FDR} + 0.036412 \text{ ROA} - 1.041996 \text{ BOPO} - 0.102626 \text{ CAR}$$

Based on the equation above, it is known that BPRS Attaqwa has the lowest FSR of -138.5008. This means that if it is assumed that the value of the independent variables that influence it is zero, then the FSR value of BPRS Attaqwa is -138.5008. On the other hand, the BPRS with the highest FSR is BPRS Amanah Sejahtera, which is 6,647.5167. This means that if the value of the independent variables is assumed to be zero, then the FSR value of BPRS Amanah Sejahtera is 6,647.5167.

The constant value results for each BPRS in Java show that BPRS Attaqwa has the lowest FSR value of 138.5008 among the others. This lowest FSR value is due to several factors, namely that the NPF of Attaqwa from 2013-2018 has increased. This means that if the NPF value of a BPRS continues to increase, it will lead to a non-performing financing risk that will disrupt the financial sustainability ratio. According to Financial Services Authority Regulation Number 15/POJK 03/2017, the net non-performing financing ratio (NPF net) should not exceed 5% of the total financing. However, the results of Fauzi and Mahmud's (2018) research

show that the FSR value of BPRS Attaqwa is not the lowest among the other BPRS that were studied.

Based on the FSR formulation results above, it shows that BPRS Amanah Sejahtera has an FSR value of 6,647.5167. This is because the NPF value of BPRS Amanah Sejahtera from 2013-2018 has fluctuated, but it has not exceeded the POJK requirement of 5%. This means that if a banking institution's NPF is not more than 5%, it will not experience non-performing financing, and the financial sustainability ratio will remain safe.

CONCLUSION

This study examined the effect of the ROA variable on the FSR of BPRS in Java Island from 2013 to 2018. Based on the data analysis using fixed effects models, it was found that partially, the CAR variable had a significant positive effect on the financial sustainability ratio of 0.4944 or 49.44%, while the BOPO variable had a significant negative effect on the financial sustainability ratio of 0.0000. Based on the results of hypothesis testing, it was found that the independent variables (NPF, FDR, ROA, BOPO, and CAR) had a significant influence with a probability value of 0.0000, which is less than the alpha level of 5%, meaning that all independent variables (NPF, FDR, ROA, BOPO, and CAR) simultaneously had a significant effect on the Financial Sustainability Ratio (FSR). The intercept results for each company showed different outcomes, where the BPRS with the lowest FSR value was BPRS Attaqwa at 138.5008, which means that assuming the value of the independent variable is zero, the FSR value for BPRS Attaqwa is 138.5008, while the BPRS with the highest FSR value was BPRS Amanah Sejahtera at 6,647.5167, which means that assuming the value of the independent variable is zero, the FSR value for BPRS Amanah Sejahtera is 6,647.5167.

Research on the influence of NPF, FDR, ROA, BOPO, and CAR on the FSR of BPRS in Java Island from 2013 to 2018 can still be further developed in future research. This study has been conducted in accordance with scientific procedures, but it still has limitations. The

results of this study have shown that the FDR variable has a significant effect on the financial sustainability ratio, so the authors suggest that managers of Islamic banks, especially Islamic people's financing banks, should increase their promotional activities to the general public. It is recommended to expand the scope of research beyond Java Island. This is to compare the influence of NPF, FDR, ROA, BOPO, and CAR on the FSR of BPRS in Java Island from 2013 to 2018, which still provides opportunities for further research by using a broader research location (Indonesia) with the addition of variables.

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