THE EFFECT OF CAPITAL ADEQUACY RATIO (CAR), RETURN ON ASSET (ROA), INFLATION, BI RATE ON TROUBLED FINANCING IN SHARIAH RURAL BANKS IN INDONESIA 2015-2019

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ABSTRACT. This study aims to collect empirical evidence regarding the effect of CAR, ROA, Inflation, BI Rate / BI7DRR partially and simultaneously on problematic financing at Islamic Rural Banks (BPRS) in Indonesia for the 2015-2019 period. The method in this study using Multiple Linear Regression Analysis (OLS). The results of this study are the independent variables partially have a significant effect on the NPF variable except for the CAR variable. The variables CAR, ROA, Inflation, BI Rate / BI7DRR together influence the NPF variable. This research implies that based on CAR, ROA, Inflation, BI Rate / BI7DRR which can affect problems in BPRS in Indonesia, the results of this study have previously had similarities and differences with previous studies. The equation is that the independent variables jointly influence the dependent variable, and the difference is that the CAR variable does not have an effect.

Keywords: Capital Adequacy Ratio (CAR), Return on Asset (ROA), Inflation, Non-Performing Financing (NPF)

1. INTRODUCTION

The development of Microfinance Institutions in Southeast Asia began with the successful model of the Grameen Bank in Bangladesh for the poor designed by Professor Yunus. Countries that implement microfinance institutions are India and Indonesia. Self-help group (SHG) is a simple model of Microfinance Institutions in India that includes 10 to 20 members in a group that consists of mostly women. The SHG organization can be in the same way as the Grameen Bank model (Thanh, Morales, & Bernadette, 2018).

From Figure 1.1 it can be seen that Vietnam is the top country for active borrowers and depositors of microfinance institutions, followed by the Philippines, Cambodia, Indonesia, and Myanmar. FSPs (Financial Services Providers) in East Asia and the Pacific have made significant strides towards reaching new and underserved customers. As of FY 2017, FSPs in this region had 79.0% of customers in rural areas thanks to the presence of large rural NGOs, rural banks, and NBFIs. In addition, outreach via digital delivery...
channels helped expand this outreach with 65.0% of customers reached through agents in FY 2017 (Mix Market, 2018).

Figure 1.1 Top Five Countries According to Active Borrowers and Top Five Countries According to Depositor.

![Graph](image)

Source: Mix Market 2017-2018

In Indonesia, microfinance institutions are divided into bank and non-bank microfinance institutions. This research focuses on micro bank financial institutions using sharia principles, namely Islamic People's Financing Bank. The following is the development of Sharia Rural Banks in Indonesia:

Figure 1.2 The development of BPRS in Indonesia 2015-2019

![Graph](image)

Source: Islamic Banking Statistics

From the picture above, it can be seen that the development of BPRS in Indonesia has increased from 2015-2019. 2015 the number of BPRS was 164 and increased in 2017 to 167 until 2019.
In BPRS in Indonesia, the composition of financing that is most widely used is financing using the murabahah contract, followed by musyarakah, multi-service, mudharabah, qardh, istisna, ijarah, salam. The most widely used financing based on the type of use is consumption financing. Based on the group that uses the most is the MSME sector. Of the financing mentioned, there was a decrease and an increase in the ratio of non-performing financing because the collectability of non-current and non-performing financing was still quite high. Financial ratios to determine the level of non-performing financing are projected by the Non-Performing Financing (NPF) ratio.

According to the Financial Services Authority Regulation Number 15/POJK.03/2017, the Bank is considered to have potential difficulties that endanger the stainability of the business as referred to in paragraph (1) if it meets one or more criteria for the ratio of non-performing financing (NPFnet) of more than 5% (five percent) of total credit or total financing.

The development of the NPF ratio in 2015-2019, 2015-2017 experienced an increase of 1.48% and in 2017-2019 experienced a significant decrease. In 2017 it was 9.68% and in 2019 it was 7.05%. The decrease was 2.25%.

There are several factors that can affect the NPF ratio in a BPRS, one of which is CAR. According to Bank Indonesia Regulation Number: 8/22 / PBI / 2006 concerning the Minimum Capital Requirement for Rural Banks Based on Sharia Principles Chapter II Capital Aspects Article 2 BPRS are required to provide a minimum capital of 8% (eight percent) of risk-weighted assets.

In addition, there are other factors, namely Return On Assets. The development of ROA at BPRS in Indonesia in 2015-2019 is that in 2017-2018 the ROA ratio has decreased by 0.68%, while in 2018-2019 the ROA ratio increased by 0.74%.

Apart from internal factors, there are external factors that affect the NPF ratio in BPRS, namely inflation and the BI Rate. The highest inflation development in Indonesia was in 2017 at 3.61%. In 2017-2019 it decreased by 0.89% so that in 2019 inflation was 2.72%. The development of the BI Rate, the highest BI rate was in 2015 at 7.75%. The BI Rate has decreased in 2019 by 1%, from 2018 to 5%.

In previous research, there were several differences in the results of research. Research results on the Capital Adequacy Ratio (CAR) according to Sherly Yolanda and Ariusni (2019) the variable capital (CAR) has a negative and significant effect on problem financing (NPF), while according to the research results of R.D. Kadir (2019) The CAR variable does not have a significant long-term effect on NPF.

Other research The results of research on Return On Asset (ROA) according to Sherly Yolanda and Ariusni (2019) profitability (ROA) have a positive and significant effect on problem financing, while according to Rindang Nuri Isnaini Nugrohawati, Syafrildha Bimo (2019) ROA has a significant negative effect on NPF, and according to RD Kadir (2019), the ROA variable has no significant effect on NPF.

The results of research on inflation according to Fary Adisetya Putra,
Dr. Imron Mawardi (2018) Inflation has no significant effect on NPF, while according to Yudhistira Ardana (2019) inflation has a significant effect on NPF.

The results of research on the BI Rate according to Rindang Nuri Isnaini Nugrohowati, Syafriidha Bimo (2019) BI Rate has a significant positive effect on NPF according to Ahmad Fatoni, Kurnia Dwi Sari Utami (2019) BI Rate / BI7DRR has a significant effect on NPF.

Based on the description of this phenomenon, it is necessary to carry out further research on problematic financing (NPF) at BPRS in Indonesia. This study aims to collect empirical evidence regarding the effect of CAR, ROA, Inflation, and BI Rate partially on problematic financing at Islamic Rural Banks (BPRS) in Indonesia for the 2015-2019 period and the effect of CAR, ROA, Inflation, and BI Rate simultaneously on non-performing financing at a Sharia Rural Bank (BPRS) in Indonesia for the period 2015-2019.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1 Sharia Rural Bank

Based on the Law of the Republic of Indonesia Number 21 of 2008 concerning Islamic Banking in article 1, it is stated that BPRS is a sharia bank that in its activities does not provide services in payment traffic (Soemitra, 2012).

Assessment of banking performance, in this case, is a BPRS including capital factors, earning asset quality, management factors, profitability factors, and liquidity factors (PBI No.9 / 17PBI/ 2007). According to Bank Indonesia, assessing the health of a bank can be seen from various aspects, the assessment of financial performance aims to determine whether the bank is in a healthy, healthy, unhealthy, and unhealthy condition (nasfi, 2019).

The problem in this research is that the financial condition of the BPRS, especially the high NPF, is therefore conducted a deeper study to answer these problems by analyzing the financial performance of the BPRS from a financial perspective.

2.2 Non-Performing Financing (NPF)

Non-Performing Financing (NPF) is part of the bank’s financial ratios that are used to measure the risk of loss associated with the possibility of debtor fails to pay off debts to the bank (Husaeni, 2017).

The Non-Performing Financing (NPF) ratio is measured by comparing the amount of non-performing financing with the total financing. The NPF value can increase if the amount of problem financing increases. If the NPF ratio increases, the non-performing financing borne by the BPRS will increase and result in an increase in the losses faced, thereby reducing the profit level of the BPRS (Widyaningrum & Septiarin, 2015).

\[
NPF = \frac{\text{non-performing loan}}{\text{Total financing}} \times 100\%
\]
2.3 Capital Adequacy Ratio

Capital is the most important index to show how well a bank is stable. One of the international standards at the Basel Committee on banking supervision is the capital adequacy ratio (CAR). The capital adequacy ratio is derived from the sum of tier 1 or core capital and tier 2 or supplementary capital to risk-adjusted asset ratios (based on Basel 1 adjusted for credit risk and based on Basel 2 adjusted for credit, operational, and market risks) (Baldwina, Alhalbonib, & Helmi, 2019).

Capital Adequacy Ratio is the Capital Adequacy Ratio (KPPM) which must be fulfilled by the bank, which is 8%. The KPPM ratio is a comparison between capital and RWA. Calculation of RWA for credit risk and market credit risk is based on the carrying value of assets in the balance sheet (after deducting Allowance for Impairment Losses/ CKPN) (ikatan, 2018).

\[ \text{CAR} = \frac{\text{Capital} \times 100\%}{\text{ATMR}} \]

2.4 Return On Asset (ROA).

ROA is a ratio that shows the company's ability to use all its assets to generate profit after tax management to evaluate the effectiveness and efficiency of company management in managing all company assets. The greater the ROA, it means that the more efficient use of company assets, or in other words with the same number of assets, a greater profit can be generated, and vice versa (Sarasyanti & Shofawati, 2018).

ROA is the ratio of a bank's ability to generate profits. The greater the ROA of a bank, the greater the bank's profits and the better it is to use the productive assets of a bank. Productive assets are assets used by the bank to generate profits, namely receivables and financing channeled by the bank. The greater the profit, the greater the value of the bank's assets (ikhsan & Daim, 2019).

\[ \text{ROA} = \frac{\text{Profits before tax} \times 100\%}{\text{Total Asset}} \]

2.5 Inflasi

Inflation is an increase in the price of goods that are general and continuous. The cause of inflation is due to supply and demand. The positive impact of inflation on low inflation encourages growth, the negative impact of reducing investment (Ambarini, 2015).

The increase in price in inflation occurs from period to period and the rate of increase varies from region to region. An increase in the price of goods in inflation occurs for all specified goods, not only for one or two goods. So, if the increase only occurs in one or two goods, it is not called inflation (Sukirno, 2012).
2.6 BI Rate

According to Bank Indonesia, the BI Rate is a policy interest rate that reflects the monetary policy stance or stance set by Bank Indonesia and announced to the public (Karim, 2015).

Bank Indonesia is strengthening the monetary operation framework by implementing a new benchmark interest rate or policy interest rate, namely the BI 7-Day (Reverse) Repo Rate, which became effective since 19 August 2016, replacing the BI Rate (Bank Indonesia, 2020).

The use of the BI 7-day (Reverse) Repo Rate instrument as the new policy rate, there are three main impacts that are expected. First, strengthening monetary policy signals with the 7-day (Reverse) Repo Rate as the main reference on the financial market. Second, the increased effectiveness of monetary policy transmission through its influence on movements in money market interest rates and bank interest rates. Third, the formation of a deeper financial market, particularly transactions and the formation of an interest rate structure on the interbank money market (PUAB) for a tenor of 3-12 months (Bank Indonesia, 2020)

3. RESEARCH METHODOLOGY

This research is an associative explanatory study that looks at the relationship of influence or causality using quantitative data methods. The population of this study is all Islamic banking operations in Indonesia for the BPRS (Islamic People’s Financing Bank) group whose financial data has been made into one equivalent in statistical reports. Bank Indonesia Islamic banking. The sample used in this study was 60 taken from the number of months from January 2015 to December 2019.

This research uses secondary data. Obtained from the Sharia Banking Statistics the financial statements of the Sharia People Financing Bank through the official website of the OJK and the official website of Bank Indonesia.

This study uses the Multiple Linear Regression Analysis (OLS) method using the E-Views version 10 computer program (software) and Microsoft Excel 2007. The multiple regression equation models used in this study is as follows:

\[ Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 \]

Before testing the Multiple Linear Regression Analysis (OLS) the data was carried out by descriptive statistical tests and classical assumption tests, namely the normality test, heteroscedasticity test, multicollinearity test, and autocorrelation test. After the data has passed the classical assumption test, the hypothesis is tested. Hypothesis testing has two tests, namely the t statistical test, which is to find out whether the independent variable has a partial effect on the independent and the f statistical test, which is to determine whether the independent variables together have a significant effect on the dependent variable. Next is the Multiple Linear Regression Analysis (OLS) to determine
the influence of the independent variable on the dependent variable.

4. ANALYSIS AND DISCUSSION

4.1 Significance test for individual parameters (Uji statistik t )

Table 4.1 t-test result

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>18.38528</td>
<td>2.945035</td>
<td>6.242805</td>
<td>0.0000</td>
</tr>
<tr>
<td>X1</td>
<td>-0.001145</td>
<td>0.104837</td>
<td>-0.010918</td>
<td>0.9913</td>
</tr>
<tr>
<td>X2</td>
<td>-2.358726</td>
<td>0.802318</td>
<td>-2.939887</td>
<td>0.0048</td>
</tr>
<tr>
<td>X3</td>
<td>0.302562</td>
<td>0.137243</td>
<td>2.204578</td>
<td>0.0317</td>
</tr>
<tr>
<td>X4</td>
<td>-0.739280</td>
<td>0.162441</td>
<td>-4.551063</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

(Source: data processed Eviews 10, 2020)

Based on the t-test (partial) table 4.1, the value of t count -0.010918 and t table (df = n-k-1) = 1.673 so that t count <t table and the value of Prob is 0.9913 so that Prob > 0.05. This means that H0 is accepted and Ha is rejected. So it can be concluded that the CAR variable partially does not have a significant effect on the NPF variable. This means that if the CAR ratio increases or not, it will not have an influence on problematic financing at the BPRS.

This can be seen from 2015-2019 the value of the CAR ratio has decreased and the NPF ratio is fluctuating, in 2017 the NPF has increased from 8.63% to 9.68%, while CAR has decreased from 21.73% to 20.81%. and in 2019 the NPF decreased from 9.3% to 7.05% while CAR continued to decline from 19.33% to 17.99%.

The results of this study support the research results of R.D. Kadir (2019) The CAR variable does not have a significant effect in the long term with a probability value of 0.643 and the short-term CAR variable does not have a significant effect on problematic financing or NPF of Islamic BPR in Indonesia. It can be concluded that Islamic BPR in Indonesia in the short term can still mitigate the risk of non-performing financing (NPF) caused by changes in the company's internal conditions.

Based on the t-test (partial) table 4.1 the t value -2.939887 and t table (df = n-k-1) = 1.673 so that the value of t count > t table and the value of Prob is 0.005 so Prob < 0.05. This means that Ha is accepted and H0 is rejected. So it can be concluded that the ROA variable has a significant effect on the NPF
variable. This means that if the ROA ratio increases, the NPF ratio will decrease.

This occurs because the greater the profit of a bank, the problematic financing at the bank decreases and the customer pays obligations to the bank smoothly.

The results of this study support the results of research conducted by Sherly Yolanda and Ariusni (2019) that partially Return on Assets (ROA) has a significant positive effect on Non-Performing Financing (NPF). This is because the value of profit generated by banks is obtained from the increase in the number of people who make credit to the BPRS but this results in the value of bad credit to increase, it can also be seen from the level of profit generated by the bank which is not used entirely as bank reserve capital to overcome problem financing, but also allocated to credit capital for the community.

Based on the t-test (partial) table 4.1 the t value of 2.204578 and t table (df = n-k-1) = 1.673 so that the value of t count > t table and the value of Prob is 0.0317 so Prob <0.05. This means that Ha is accepted and H0 is rejected. So it can be concluded that the inflation variable has a significant effect on the NPF variable. This means that if the inflation ratio increases, the NPF ratio will also increase.

When there is inflation, the prices of basic commodities or other goods experience an increase, making it difficult for customers to meet their daily needs, and difficulties in paying financing bills to banks, thus causing problematic financing to increase.

The results of this study support the results of research conducted by Ahmad Fatoni, Kurnia Dwi Sari Utami (2019) in the long term that inflation has a significant positive effect on NPF. Inflation tends to increase the price of goods so that people's purchasing power is eroded because their income is constant, so this will affect the ability of customers to pay off their financing.

The results of this study support the results of research conducted by Ari Prasetyo (2019) that inflation has a significant positive effect on NPF. The increase in inflation in West Java during 2011-2015 will increase the NPF Ratio of BPRS in West Java.

Based on the t-test (partial) table 4.1 the value of t count ( - 4.551063) and t table (df = nk-1) = 1.673 so that the value of t count > t table and the value of Prob is 0.000 so that Prob <0.05. This means that Ha Accepted and H0 is rejected. So it can be concluded that the BI Rate variable has a significant effect on the NPF variable, meaning that if the BI Rate increases, the NPF ratio will decrease.

The highest level of financing used by the public is murabahah financing, where this financing affects BI interest rates. Where if the BI interest rate decreases or increases, it will affect the margin so that Islamic banks must adjust their financing margins. If the financing margin increases, it will burden the customer to pay for it so that few customers will apply for financing thereby reducing the level of problematic financing.

The results of this study support the results of research conducted by Ahmad Fatoni, Kurnia Dwi Sari Utami (2019) that the short-term estimate, the
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BI Rate variable, has a negative effect on problem financing. This is because in some Sharia BPRs, the determination of the equivalent rate of Islamic BPRs often refers to the BI Rate where when there is an increase in loan interest rates, the equivalent rate will be increased. A high equivalent rate will reduce customer interest in applying for financing. This is because it will burden the debtor when paying the equivalent rate and principal of the financing, thereby reducing the risk of financing.

4.2 Simultaneous significance test (Test Statistic F) Table 4. 2 F Test Result

<table>
<thead>
<tr>
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<td>0.298165</td>
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<tr>
<td>Adjusted R-squared</td>
<td>0.247122</td>
</tr>
<tr>
<td>S.E. of regression</td>
<td>0.939646</td>
</tr>
<tr>
<td>Sum squared resid</td>
<td>48.56144</td>
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<tr>
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<td>F-statistic</td>
<td>5.841493</td>
</tr>
<tr>
<td>Prob(F-statistic)</td>
<td>0.000544</td>
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The value of F count is 5.841493 while F table (df = n-k-1) = 2.54 so that F count> F table and the value of Prob (F-statistic) is 0.000544 so Prob <0.05. So the conclusion is that simultaneously or together the variables CAR, ROA, Inflation, and BI Rate have a significant and simultaneous effect on the NPF variable.

4.3 Adjusted R Square

Table 4. 3 Result of the coefficient of determination

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From table 4. 3 that the Adjusted R Square value obtained is 0.247122, this shows that the CAR, ROA, Inflation, BI Rate variables are able to explain 25% of the dependent variable (NPF), while the remaining 75% is explained by other variables such as GDP, GDP, BOPO, FDR.
4.4 Multiple Regression Analysis

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R-squared 0.298165 Mean dependent var 9.864333
Adjusted R-squared 0.247122 S.D. dependent var 1.082934
S.E. of regression 0.936144 Akaike info criterion 2.793029
Sum squared resid 48.56144 Schwarz criterion 2.967558
Log likelihood -78.79087 Hannan-Quinn criterion 2.861297
F-statistic 5.841493 Durbin-Watson stat 0.463616
Prob(F-statistic) 0.000544

From Table 4.4 above, it can be obtained the multiple regression equation as follows: \[ Y = 18.38528 + (-0.001145) \cdot \text{CAR} + (-2.358726) \cdot \text{ROA} + 0.302562 \cdot \text{INFLATION} + (-0.739280) \cdot \text{BI Rate}. \]

Rate. From the above equation, it can be seen that:

a. If the value of Capital Adequacy Ratio (CAR), Return On Assets (ROA), Inflation, and BI Rate is 0, the value of Non-Performing Financing (NPF) is 18.38528. This means that if the Capital Adequacy Ratio (CAR), Return On Assets (ROA), Inflation, and the BI Rate do not carry out their operational activities, then in the period January 2015 - December 2019 the number of Non-Performing Financing (NPF) is 18.38528%.

b. If the Capital Adequacy Ratio (CAR) is -0.001145, it means that every 1% increase in the CAR variable and the other variables are constant, it will cause a decrease in the NPF value of 0.1145%.

c. If the Return On Asset (ROA) value is -2.358726, it means that every 1% increase in the ROA variable and the other variables are constant, it will cause a decrease in the NPF value of 235.8726%.

d. If the inflation value is 0.302562, it means that every 1% increase in the inflation variable and other variables is constant, it will cause an increase
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...in the NPF value of 30.2562%.

e. If the BI Rate value is -0.739280, it means that every 1% increase in the BI Rate variable and other variables is constant, it will cause a decrease in the NPF value of 73.9280%.

5. CONCLUSION

The independent variable CAR does not have a significant effect on the NPF variable, the ROA variable has a significant negative effect on the NPF variable, the inflation variable has a significant positive effect on the NPF variable and the BI Rate variable has a significant negative effect on the NPF. The variables CAR, ROA, Inflation, BI Rate together have a significant influence on the NPF variable. The dominant variable that affects the NPF is the BI Rate / BI7DRR.

The limitation in this research is the observation time which is only 5 years and the variables used for external banks are still limited. Future research is expected to extend the observation time and add to bank internal variables such as FDR, BOPO, and external banks such as exchange rates and GDP.

6. REFERENCES


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