

**Profitability of Islamic Rural Banks in West Sumatra:  
Analysis of the Third Party Funds and Financial Ratios**

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Submitted: 2021-09-28

Revised: 2021-12-18

Published: 2021-12-31



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DOI: <http://dx.doi.org/10.30983/es.v5i2.4829>

**Abstract**

*This research examines the problem of profitability in Islamic Rural Bank (BPRS) in West Sumatra Province. The purpose of this study was to analyze Third Party Funds (DPK), Capital Adequacy Ratio (CAR) and Non Performing Financing (NPF) as determinants that affect Return on Asset (ROA) at BPRS in West Sumatra Province through the intervening variable Financing to Deposit Ratio (FDR) for the 2015-2020 period. The research method uses descriptive quantitative approach with statistical path analysis through Sobel test. This study uses secondary data obtained from the financial statements of the BPRS. The results showed that DPK, CAR and FDR had no direct effect on the ROA of BPRS in West Sumatra Province for the 2015-2020 period, only NPF had a direct effect on ROA. While indirectly through intervening variables, DPK and NPF have no effect on ROA, only CAR can be mediated by FDR on ROA. This research contributes to enriching knowledge about Islamic banking and can be used as consideration for entities in increasing the profitability of Islamic Rural Bank by looking at the factors that can affect profitability with FDR as the mediating variable.*

**Keywords:** BPRS, DPK, CAR, NPF, FDR.

**Abstrak**

Penelitian mengkaji tentang masalah profitabilitas pada BPRS di Provinsi Sumatera Barat. Tujuan penelitian ini adalah untuk menganalisis DPK CAR dan NPF sebagai determinan yang mempengaruhi ROA pada BPRS di Provinsi Sumatera Barat melalui intervening variable FDR periode 2015-2020. Metode penelitian menggunakan kuantitatif deskriptif dengan pendekatan statistik *path analysis* melalui uji sobel. Penelitian ini menggunakan data sekunder yang diperoleh dari laporan keuangan BPRS. Hasil penelitian menunjukkan bahwa DPK, CAR dan FDR secara langsung tidak memiliki pengaruh terhadap ROA BPRS di Provinsi Sumatera Barat periode 2015-2020, hanya NPF yang berpengaruh langsung terhadap ROA. Sedangkan secara tidak langsung melalui variable intervening, DPK dan NPF tidak memiliki pengaruh terhadap ROA, hanya CAR yang mampu dimediasi oleh FDR terhadap ROA. Hasil penelitian ini berkontribusi menambah khazanah ilmu pengetahuan tentang perbankan syariah dan dapat digunakan sebagai bahan pertimbangan bagi entitas dalam meningkatkan profitabilitas Bank Pembiayaan Rakyat Syariah dengan memperhatikan faktor-faktor yang dapat mempengaruhi profitabilitas dengan FDR sebagai variabel mediasi nya.

**Kata Kunci:** BPRS, DPK, CAR, NPF, FDR.

## Introduction

Profitability is a description of a bank's ability to benefit from its operational activities. The level of profitability obtained by the bank can be measured using the profitability ratio. Profitability ratio is a ratio to assess the company's ability to seek profit and provide a measure of the effectiveness of a company's management.<sup>1</sup> Profitability ratios that are often used include the Return on Assets Ratio (ROA), Return on Equity Ratio (ROE) and Profit Margin Ratio.

Return on Assets (ROA) is a ratio that describes the level of profit obtained by the bank from the total assets owned. This ratio also shows the level of efficiency of asset management carried out by banks. The ROA ratio is obtained by calculating the ratio of profit after tax with total assets or Net Income divided by total assets. The results obtained from the calculation of this ratio indicate the level of profitability generated by the company and the level of profitability indicates the company's financial performance. The greater the ROA of a bank, the greater the level of profit achieved by the bank and the better the position of the bank in terms of asset use.<sup>2</sup>

The value of the bank's ROA ratio in each period is not the same. There are several factors that can affect the value of a bank's ROA ratio, including the amount of Third Party Funds (DPK), Capital Adequacy Ratio (CAR), financing, Non-Performing Financing (NPF) and Financing to Deposit Ratio (NPF).

DPK is a source of funds obtained by banks in the form of savings, current accounts and time deposits. Savings and current accounts are deposits that can be withdrawn at any time by customers so that the existence of these funds is shorter than time deposits with

maturities of 1, 3, 6 or 12 months so that the funds stay in the bank longer. DPK has a positive relationship with financing and financing also has a positive relationship with profitability.<sup>3</sup>

Apart from third party funds, banks as financial institutions of course obtain other funds from the bank's own capital which is often referred to as the Capital Adequacy Ratio (CAR). CAR is a bank's ability to cover the decline in its assets as a result of bank losses caused by risky productive assets. The ability of banks to absorb various risks from each productive asset will be better if the CAR value is higher. CAR has a positive relationship to profitability, the more capital the bank has, the greater the amount of funds disbursed if the TPF is insufficient, so that it will have an impact on the profitability obtained by the bank. The amount of the CAR ratio is regulated in Bank Indonesia Regulation (PBI) number 8/22/PBI/2006 concerning Minimum Capital Adequacy Requirements for Rural Banks Based on Sharia Principles, the CAR ratio or the ratio of bank capital to Risk Weighted Assets above 8%.

Furthermore, NPF is the financial ratio between non-performing financing and the total financing disbursed by Islamic banks. NPF has a negative relationship with profitability. The bank will benefit if the NPF is getting lower. On the other hand, if the NPF level is high, the bank will experience losses caused by the return on non-performing financing.<sup>4</sup>

<sup>3</sup> Rizal Rizal, Khairil Faizal Khairi, and Ifelda Nengsih, 'The Influence Of Financing and Third Party Funds (DPK) Towards Roa Of Islamic Rural Bank (BPRS) In Sumatera Barat', *Ekonomika*, 5.2 (2020), 157-74 <<https://doi.org/10.24042/febi.v5i2.7532>>.

<sup>4</sup> Uus Ahmad Husaeni, 'Analisis Pengaruh Dana Pihak Ketiga Dan Non Performing Financing Terhadap Return On Asset Pada BPRS Di Indonesia.', *Nisbah: Jurnal Perbankan Syariah*, 6.2 (2020), 124; Heliyani Heliyani, 'Peran Non Performing Financing Terhadap Profitabilitas Bank Pembiayaan Rakyat Syariah Dengan

<sup>1</sup> Kasmir, *Pengantar Manajemen Kenangan*, (Jakarta: Kencana, 2010).

<sup>2</sup> Lukman Dendawijaya, *Manajemen Perbankan* (Jakarta: Ghalia Indonesia, 2009).

Financing to Deposit Ratio (FDR) is a ratio used to measure a bank's ability to repay withdrawals made by depositors or customers by relying on financing provided to the public as a source of liquidity.<sup>5</sup> FDR refers to the amount of financing disbursed by the bank from the total third party funds that have been collected. There is a positive relationship between FDR and profitability, the greater the FDR value, the greater the profitability that will be obtained by the bank.<sup>6</sup>

This study uses an intervening variable (connector). Intervening variables (connectors) are variables that theoretically can affect the relationship between the independent variable and the dependent variable into an indirect relationship and cannot be observed and measured.<sup>7</sup> The intervening variable used in this study is the Financing to Deposit Ratio (FDR), where the FDR variable is used to determine the effect of TPF, CAR and NPF variables on profitability (ROA) through the FDR that occurs in BPRS in West Sumatra Province.

Currently there are 7 BPRS that still exist in West Sumatra Province, namely BPRS Mentari Pasaman Saiyo, BPRS Carana Kiat Andalas, BPRS Ampek Angkek Candung, BPRS Haji Poor, BPRS Barakah Naawaitul Ikhlas, BPRS Al-Makmur and BPRS Gajahtongga Koto Piliang. Based on a report published on the OJK website, it shows that the average ROA value of the 7 BPRS is below the standard ROA value set except for 2016, 2017 and 2018, even in 2020 it fell from 1.38% in 2019 to 1.33% in 2020, as shown in the following table:

Table 1. Average Value of BPRS Financial Data in West Sumatra Province

Years	ROA (%)	FDR (%)	CAR (%)	DPK (Ribuan)	NPF (%)
2015	1,33	78,40	15,00	Rp13.463.711	16,31
2016	1,53	86,79	11,90	Rp14.321.356	12,64
2017	2,20	86,57	16,95	Rp14.324.102	11,87
2018	1,91	81,52	19,85	Rp14.924.937	11,11
2019	1,38	84,85	28,02	Rp14.978.665	6,33
2020	1,33	80,12	31,45	Rp15.797.076	6,67

Source: Data processed

In 2019 there was an increase in the number of TPF, CAR and FDR from the previous year, but the ROA ratio actually decreased to 1.38% in 2019 from 1.91% in 2018. Likewise, the NPF ratio decreased to 6.33% in 2019 from 11.11% in 2019. Furthermore, in 2020 the ROA ratio decreased again to 1.33% from the previous value of 1.38%, while the number of TPF and CAR increased and FDR decreased. This shows that there is a gap where an increase in TPF, CAR, a decrease in the value of NPF will be able to increase the amount of funds disbursed (FDR) by banks and will increase the ROA ratio but in 2019 this did not happen.

In 2020 there was an increase in the number of TPF and CAR, but it did not increase the value of the FDR ratio which should have increased because it had a positive relationship with TPF and CAR. Based on this data, it is necessary to conduct a study to examine the effect of TPF, CAR and NPF on ROA of BPRS in West Sumatra Province with FDR as the intervening variable.

## Theoretical review

### Return on Asset (ROA)

Return on Assets (ROA) is a ratio used to measure the ability of a bank's management to generate profits or overall profits.<sup>8</sup> This ratio shows the level of efficiency of asset management carried out by the bank

Inflasi Sebagai Variabel Moderasi, *EKONOMIKA SYARIAH: Journal of Economic Studies*, 4.1 (2020), 111–22.

<sup>5</sup> Veithzal Rivai and Arviyan Arifin, *Islamic Banking* (Jakarta: Bumi Aksara, 2010).

<sup>6</sup> Medina Almunawwaroh and Rina Marlina, 'Pengaruh Car, Npf Dan Fdr Terhadap Profitabilitas Bank Syariah Di Indonesia', *Amwaluna: Jurnal Ekonomi Dan Keuangan Syariah*, 2.1 (2018), 1–17.

<sup>7</sup> Sugiyono, *Metode Penelitian Kuantitatif* (Bandung: Alfabeta, 2018).

<sup>8</sup> Dendawijaya.

concerned. ROA is a ratio that describes the company's ability to utilize all of its assets (assets) to generate net profit after tax.<sup>9</sup> ROA is an indicator of the ability of banking management to generate returns on a number of assets owned by a bank. ROA is obtained by calculating the ratio between profit before tax and total assets (Net Income divided by Total Assets).<sup>10</sup>

ROA is a ratio used to measure a bank's ability to utilize assets to earn a profit. This ratio measures the rate of return made by banks using assets. ROA is a comparison between net income and total assets owned by the bank which shows the ability of Islamic banks to earn profits by utilizing their assets. The productivity of Islamic bank assets in generating net income will be better if the ROA ratio is also getting higher. ROA can be calculated by the formula:

$$\text{ROA} = \frac{\text{Profit before tax} \times 100\%}{\text{Average Total Assets}}$$

$$\text{DPK} = \text{Giro} + \text{Deposito} + \text{Tabungan}$$

### Capital Adequacy Ratio (CAR)

Capital is an important thing in the banking business. Banks that have a high level of capital are indicators of a healthy bank. This is because the bank's capital shows a condition that is expressed by the Capital Adequacy Ratio (CAR). CAR is a capital ratio that shows the bank's ability to provide funds for development purposes and accommodate various risks of loss of funds caused by the bank's operational activities.<sup>13</sup>

Bank Indonesia has determined CAR as a minimum capital adequacy requirement that must be maintained by every bank for a certain proportion of Aktiva Tertimbang Menurut Risiko (ATMR). CAR can be calculated by the following formula:

$$\text{CAR} = \frac{\text{Modal Bank}}{\text{ATMR}} \times 100\%$$

### Third Party Funds (TPF)

Third Party Funds (TPF) or Third Party Funds are funds that have been collected from public trust in banks in the form of savings, deposits, and current accounts which are then distributed by banks. Every bank must act as a fundraiser, and third party funds are the largest funds that are most relied upon by banks.<sup>11</sup> Third party funds (DPK) are funds collected by banks from the wider community, consisting of demand deposits (demand deposits), savings deposits and time deposits.<sup>12</sup> TPF can be calculated by the formula:

### Non Performing Financing (NPF)

Non-Performing Financing (NPF) is an indicator of a bank's failure in managing the banking business which will have a negative effect on bank performance, including problems that will arise from a high NPF, namely Liquidity problems (banks' inability to pay third parties), Profitability (financing which cannot be collected) and Solvency (reduced capital).<sup>14</sup>

<sup>9</sup> Eduardus Tandelilin, *Portofolio Dan Investasi Teori Dan Aplikasi* (Yogyakarta: Kanisius, 2010).

<sup>10</sup> Frianto Pandia, *Manajemen Dana Dan Kesehatan Bank* (Jakarta: Rineka Cipta, 2012).

<sup>11</sup> Dendawijaya.

<sup>12</sup> Kasmir, *Dasar-Dasar Perbankan* (Depok: Rajawali Pers, 2014).

<sup>13</sup> Anindya Ardiansari and others, 'Pengaruh Dana Pihak Ketiga, Non Performing Financing, Capital Adequacy Ratio Dan Return on Asset, Terhadap Tingkat Likuiditas', *Management Analysis Journal*, 5.1 (2016), 7-16 <<https://doi.org/10.15294/maj.v5i1.5573>>.

<sup>14</sup> Solihatun, 'Analisis Non Performing Financing (Npf) Bank Umum Syariah Di Indonesia Tahun 2007 - 2012', *Jurnal Ekonomi Pembangunan*, 12.1 (2014), 58 <<https://doi.org/10.22219/jep.v12i1.3655>>.

Financing risk for Islamic banks occurs when the quality of financing from current to substandard (class III), doubtful (class IV) and loss (class V). Financing risk can be measured using the Non Performing Ratio (NPF).<sup>15</sup> NPF is the number of non-performing financing that may not be collectible, the larger the NPF, the worse the performance of the bank.<sup>16</sup>

NPF is one indicator of the health of Islamic bank asset quality, the higher the NPF value in a bank (above 5%), the bank can be categorized as an unhealthy bank. So that the higher the NPF ratio, the worse the quality of bank financing which can cause the number of non-performing financing to increase, then a bank is likely to be in an increasing problematic condition. The formula for calculating NPF is:

$$\text{NPF} = \frac{\text{Total Troubled Financing}}{\text{Total Financing}} \times 100\%$$

### **Financing to Deposit Ratio (FDR)**

Financing to Deposit Ratio (FDR) is the ratio of financing to third party funds, namely the comparison between the financing provided by Islamic banks and third party funds that have been collected by Islamic banks to customers. FDR is a traditional measurement that includes time deposits, savings, current accounts, and others that are used to fulfill customer loan applications in financing activities.

FDR of Islamic banks is the ratio of the total amount of financing provided by the bank to the funds received by the bank. If the ratio is higher, it indicates the lower liquidity capacity of the bank concerned. The reduced level of liquidity can have an impact on

increasing profitability. So FDR has a positive influence on the level of profitability. Due to the high FDR, the distribution of funds for financing is getting bigger, so that from these types of financing it is expected to increase the profitability of Islamic Banks.

The FDR that has been determined by Bank Indonesia must not exceed 110%, which means that the bank may provide financing in excess of the amount of third party funds that the bank has collected as long as it does not exceed 110%. FDR has the following formula:

$$\text{FDR} = \frac{\text{Total Financing}}{\text{Total DPK}} \times 100\%$$

### **Research Method**

The data used in this research is secondary data in the form of panel data which is a combination of cross-sectional and time series data. This panel data consists of 7 PT BPRS in West Sumatra Province in the form of Financial Reports from 2015 to 2020. While the data source in this study is secondary data sources in the form of statistical reports from the Financial Services Authority (OJK). In this study there are three variables used, namely the independent variable in the form of Third Party Funds (DPK), Capital Adequacy Ratio (CAR), Non Performing Financing (NPF), the dependent variable in the form of ROA and the intervening variable in the form of Financing to Deposit Ratio (FDR). The data analysis technique in this study uses path analysis using the SPSS 26 software program.

The data processing step begins with performing the classical assumption test including normality test, multicollinearity test, heteroscedasticity test and autocorrelation test, hypothesis testing and path analysis. Path analysis aims to calculate the direct effect of the independent variable on the dependent variable and also the indirect effect of the independent variable on the dependent variable through the intervening variable.

<sup>15</sup> A Wangsawidjaja Z, *Pembiayaan Bank Syariah* (Jakarta: Gramedia Pustaka Utama, 2012).

<sup>16</sup> Fitri Zulifiah and Joni Susilowibowo, 'Pengaruh Inflasi, Bi Rate, Capital Adequacy Ratio (CAR), Non Performing Finance (NPF), Biaya Operasional Dan Pendapatan Operasional (BOPO) Terhadap Profitabilitas Bank Umum Syariah Periode 2008-2012', *Jurnal Ilmu Manajemen (JIM)*, 2 (2014).

The testing process is related to whether the Financing to Deposit Ratio (FDR) acts as an intervening variable in the influence of Third Party Funds (DPK), CAR and NPF on Profitability (ROA), so this study was carried out in the Sobel test. Sobel test hypothesis testing can be done with the procedure developed by Sobel (Sobel Test). The formulation of the Sobel test is as follows:

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$$Z = \frac{t_{b1} \times t_{a4}}{\sqrt{t_{b1}^2 + t_{a4}^2}}$$

Description :

- a. a: Independent path (X) with intervening variable (Z)
- b. b: Path of intervening variable (Z) with dependent variable (Y)

If the value of  $Z > 1.96$ , then reject  $H_0$  which means  $Z$  is able to mediate the effect of variable  $X$  on variable  $Y$ .<sup>17</sup>

The hypotheses proposed in this study are as follows:

H1 = Third Party Funds (TPF) have an effect on Return on Assets (ROA) at BPRS in West Sumatra for the 2015-2020 period.

H2 = Capital Adequacy Ratio (CAR) has an effect on Return on Assets (ROA) at BPRS in West Sumatra for the 2015-2020 period.

H3 = Non-Performing Financing (NPF) has an effect on Return On Assets (ROA) at BPRS in West Sumatra for the 2015-2020 period.

H4 = Financing to Deposit Ratio (FDR) has an effect on Return On Assets (ROA) at BPRS in West Sumatra for the 2015-2020 period.

H5 = Financing to Deposit Ratio (FDR) is able to mediate the relationship between Third Party Funds (DPK) to Return On Assets (ROA) at BPRS in West Sumatra for the 2015-2020 period.

H6 = Financing to Deposit Ratio (FDR) is able to mediate the relationship between Capital Adequacy Ratio (CAR) to Return On Assets (ROA) at BPRS in West Sumatra for the 2015-2020 period.

H7 = Financing to Deposit Ratio (FDR) is able to mediate the relationship between Non Performing Financing (NPF) and Return On Assets (ROA) at BPRS in West Sumatra for the 2015-2020 period.

## Results and Discussion

### Data Description

The data in this study consisted of 7 Islamic Rural Bank in West Sumatra using annual report data starting from 2015 to 2020 for each variable. Details of data for all variables in this study can be seen from the following table:

<sup>17</sup> Imam Ghozali, *Aplikasi Analisis Multivariate Dengan Program SPSS* (Semarang: Badan Penerbit Universitas Diponegoro, 2006).

Table 2. Research data

BPRS Name	Years	Variabel				
		DPK (Rp Juta)	CAR (%)	NPF (%)	FDR (%)	ROA (%)
BPRS Mentari Pasaman Saiyo	2015	7.109.347	13.27	19.34	93.26	2.60
	2016	7.676.969	15.00	19.42	83.45	0.80
	2017	8.714.226	12.44	14.55	89.55	1.36
	2018	8.164.987	17.50	21.84	103.42	1.66
	2019	8.938.842	25.51	10.57	98.02	0.08
	2020	9.909.718	29.11	8.51	100.17	0.07
BPRS Carana Kiat Andalas	2015	3.956.955	7.81	54.24	60.99	(3.53)
	2016	3.745.555	16.61	40.73	67.46	(0.72)
	2017	4.999.155	10.49	28.05	113.67	(0.70)
	2018	4.397.432	19.67	22.67	77.17	0.82
	2019	6.087.432	20.66	10.34	84.50	1.95
	2020	5.363.482	33.75	7.78	91.56	1.34
BPRS Ampek Angkek Candung	2015	21.840.291	15.61	19.52	64.63	1.04
	2016	21.818.976	15.26	18.33	73.91	1.34
	2017	21.799.624	13.35	19.36	64.91	1,76
	2018	21.317.759	17.23	16.81	61.66	1.45
	2019	20.052.914	19.83	14.72	63.74	1.61
	2020	18.187.590	21.56	13.22	73.10	1.48
BPRS Haji Miskin	2015	16.692.550	17.98	3.00	92.55	2.25
	2016	18.448.977	0.00	4.96	0.00	0.00
	2017	23.369.118	20.96	4.80	98.65	2.66
	2018	28.837.830	17.52	4.54	86.33	2.77
	2019	32.107.454	28.33	2.79	86.55	2.40
	2020	38.219.025	27.94	2.83	89.24	2.14
BPRS Barakah Nawaitul Ikhlas	2015	5.111.803	25.33	2.98	72.22	3.93
	2016	6.182.375	23.66	2.39	74.61	3.47
	2017	6.666.574	23.43	2.38	60.01	4.09
	2018	7.109.902	24.03	4.01	62.67	1.80
	2019	6.431.571	28.77	1.37	71.48	(0.88)
	2020	5.841.689	37.86	8.24	49.50	(1.15)
BPRS Al Makmur	2015	35.976.634	11.00	1.73	79.45	2.00
	2016	38.229.742	10.07	2.64	86.17	1.39
	2017	27.654.718	17.00	8.21	79.20	1.46
	2018	24.312.649	18.02	2.25	79.36	1.85
	2019	20.483.743	27.36	1.12	82.50	0.78
	2020	21.955.728	27.02	2.49	72.13	0.90
BPRS Gajahtongga Kotopiliang	2015	3.558.400	14.00	13.34	86.00	1.00
	2016	4.146.900	13.00	8.21	92.00	2.00
	2017	7.065.300	21.00	5.74	100.00	3.35
	2018	10.334.000	25.00	5.67	100.00	3.00
	2019	10.748.700	45.68	3.40	107.18	3.73
	2020	11.102.300	42.89	3.64	85.13	4.52

Source: Data Processing Result

### ***Classic assumption test***

Classical assumption test is used to fulfill data processing requirements in path analysis and ensure the test equipment can be used in this study. The assumptions that need to be tested include normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test.

The normality test was carried out using the test Kolmogorov-Smirnov with the criteria if the value Asymp. Sig. (2-tailed) ( $>$ ) 0,05 data is normally distributed. Based on the normality test with the Kolmogorov-Smirnov Test, the Asymp value was obtained. Sig. (2-tailed) of 0.197 is greater than 0.05 which means the residual value is normally distributed.

The multicollinearity test aims to test whether there is a correlation between the independent variables in the regression model.<sup>18</sup> A good regression model is that there is no correlation between the independent variables. In this study, the multicollinearity test was carried out by looking at the tolerance and Variance Inflation Factor (VIF). Provided that if the tolerance value is  $< 0.10$  and the VIF value is  $> 10$ , then a multicollinearity problem occurs, and vice versa. The results of the calculation of the tolerance value show that the tolerance value is more than 0.10 and the Variance Inflation Factor (VIF) value has a small value of 10. It can be concluded that there is no multicollinearity between variables.

The heteroscedasticity test aims to test whether in the regression model there is an inequality of variance from the residuals of one observation to another observation. If the residual variance from one observation to another observation is still called homoscedasticity and if it is different it is called heteroscedasticity. A good regression model is one with homoscedasticity or one without heteroscedasticity. The test results using a scatter plot show that the points on the scatter plot do not form a certain pattern or form a random pattern, and spread above and below the Y axis zero, so it can be concluded that there is no heteroscedasticity.

The autocorrelation test aims to test whether in the linear regression model there is a correlation between the confounding error in period t and the confounding error in period t-1 (previous). Tests using the Durbin Watson test obtained a DW value of 0.972 with the number of variables (k) = 4, sample (n) = 42, du value (table) = 1.7202, dl (table) = 1.3064 and 4-du value = 2.2798. So the Durbin Watson value of  $1.3064 < 0.972 < 2.2798$  is in the range  $dl < d < du$  so it can be concluded

that the regression model has a positive autocorrelation. After making improvements by means of variables in the log, the results obtained are DW values of 1.810, du values of 1.7202, and 4-du values of 2.2798. So the result is  $1.810 > 1.7202 < 2.2798$ , it can be concluded that there is no autocorrelation.

### Hypothesis testing

The results of hypothesis testing can be seen from the following table:

Table 3. Partial Test

Variabel	T	Sig.
X1_DPK	-.249	.805
X2_CAR	-.061	.951
X3_NPF	-3.977	.000
Z_FDR	1.858	.071

Source: Data processed

Based on the results of the partial test of model 1, it can be obtained that the sig values of TPF, CAR and FDR are greater than 0.05 so that H1, H2 and H4 which means that partially there is no effect of TPF, CAR and FDR on ROA of BPRS in West Sumatra Province during the period 2015-2020. Only the NPF variable has a small sig value of 0.05 so H3 is accepted, which means that NPF has an influence on ROA at BPRS in West Sumatra Province.

### Path Analisis

The path diagram in this study consists of two structural equations, where X1, X2 and X3 are independent variables and Z and Y are dependent variables. The structural equations and the results of the path analysis can be seen as follows:

First Model

$$Y = a_1 + b_1. X_1 + b_2. X_2 + b_3. X_3 + b_4.Z + e_1$$

Second Model

$$Z = a_2 + c_1. X_1 + c_2. X_2 + c_3. X_3 + e_2$$

<sup>18</sup> Imam Ghozali, *Analisis Aplikasi Multivariate Dengan Program IBM SPSS 20* (Semarang: Badan Penerbit Universitas Diponegoro, 2013).



Furthermore, to find out whether Financing to Deposit Ratio (FDR) is an intervening variable from Third Party Funds (DPK), Capital Adequacy Ratio (CAR) and Non-Performing Financing (NPF) to Profitability (ROA), the Sobel test is carried out. Sobel test for each variable as follows:

- a. Sobel test for FDR as a mediation of TPF to ROA.

$$Z = \frac{t_{b1} \times t_{d4}}{\sqrt{t_{b1}^2 + t_{d4}^2}} = \frac{-0,031 \times 1,858}{\sqrt{(-0,031)^2 + (1,858)^2}} = \frac{-0,058}{\sqrt{3,452}} = \frac{-0,058}{1,858} = -0,031$$

Because the value  $|Z| = -0.031 < 1.96$  then reject H5 FDR is unable to mediate Third Party Funds (TPF) on ROA

- b. Sobel test for FDR as a mediation of CAR on ROA

$$Z = \frac{t_{b2} \times t_{d4}}{\sqrt{t_{b2}^2 + t_{d4}^2}} = \frac{1,671 \times 1,858}{\sqrt{(1,671)^2 + (1,858)^2}} = \frac{5,188}{\sqrt{6,244}} = \frac{5,188}{2,499} = 2,076$$

Because the value  $|Z| = 2.076 > 1.96$  then accept H6 FDR is able to mediate the Capital Adequacy Ratio (CAR) to ROA

- c. Sobel test for FDR as a mediation of NPF on ROA

$$Z = \frac{t_{b3} \times t_{d4}}{\sqrt{t_{b3}^2 + t_{d4}^2}} = \frac{0,296 \times 1,858}{\sqrt{(0,296)^2 + (1,858)^2}} = \frac{0,550}{\sqrt{3,540}} = \frac{0,550}{1,881} = 0,292$$

Because the value  $|Z| = 0.292 < 1.96$  then reject H7 FDR is not able to mediate Non Performing Financing (NPF) on ROA

## Discussion

The results of path analysis through the Sobel test showed that the presence of FDR as an intervening variable was only able to mediate CAR on ROA at BPRS in West Sumatra Province. This shows the role of CAR in the process of distributing financing to BPRS in the 2015-2020 period, which means that there is a share of capital distributed by banks. However, the condition is not in line with the FDR ratio, which on average in the 2015-2020 period is below 100% because if there is capital that is distributed it will be seen from the value of the FDR ratio which is above 100%, meaning that all DPK is distributed and then added with capital as a form of maintain bank liquidity. Therefore, it is necessary to conduct a specific study to reveal this condition.

The next result is that FDR is not able to mediate TPF and NPF on ROA at Islamic Rural Bank of West Sumatra Province. FDR is a ratio that describes the amount of financing disbursed from the total TPF so that the more TPF, the greater the funds that can be disbursed by the bank, meaning that the amount disbursed depends on the amount of TPF. Then, when the amount of financing disbursed increases, it will increase the amount of profit earned by the bank. However, this condition does not apply to the Islamic Rural Bank of West Sumatra Province for the 2015-2021 period, where the increase in third party funds is not followed by an increase in the amount of financing so that it has an impact on profitability. Therefore, it is necessary to conduct a more specific study regarding this matter because the increase in TPF is not always followed by an increase in the amount of financing disbursed.

Studies that discuss the factors that affect the profitability of Islamic banks have been previously investigated by using Return

on Assets (ROA) as an indicator of profitability measurement. Capital Adequacy Ratio (CAR) and Non Performing Financing (NPF) have a significant negative effect on Profitability (ROA) and Financing to Deposit Ratio (FDR) have a significant positive effect on Profitability (ROA) of Islamic Commercial Banks in Indonesia.<sup>19</sup> Meanwhile, Third Party Funds and Non-Performing Financing (NPF) have a significant effect on the Return on Assets (ROA) of BPRS in Indonesia<sup>20</sup> and also have an effect on Return on Assets (ROA) of BPRS in West Sumatra.<sup>21</sup> Mudharabah and Musyarakah financing have an effect on profitability as measured by Return on Equity (ROE) at BPRS in Indonesia, but Murabahah financing has no effect on ROE.<sup>22</sup>

Previous research examines the direct influence of Third Party Funds and financial ratios on profitability as measured by the Return on Assets at Islamic Commercial Banks and Islamic People's Financing Banks. This study examines from the other side by making FDR as an intervening variable in influencing the profitability of a BPRS in West Sumatra which has not previously been studied in this regard. So this is a new part to be researched. This study can add to the treasures of Islamic banking knowledge.

## Conclusion

Based on data processing, testing and data analysis, it can be concluded several points, namely:

- 1) TPF has no significant effect on ROA at BPRS in West Sumatra for the 2015-2020

<sup>19</sup> Almunawwaroh and Marlina.

<sup>20</sup> Husaeni.

<sup>21</sup> Rizal, Khairi, and Nengsih.

<sup>22</sup> Rivalah Anjani and Maulidiyah Indira Hasmarani, "Pengaruh Pembiayaan Mudharabah, Musyarakah Dan Murabahah Terhadap Profitabilitas BPRS Di Indonesia Periode 2012-2015", *Jurnal Ekonomi & Keuangan Islam*, 2.2 (2016), 38-45 <<https://doi.org/10.20885/jeki.vol2.iss2.art5>>.

period. This means that the size of the TPF ratio will not affect the bank's ROA.

- 2) CAR has no significant effect on ROA at BPRS in West Sumatra for the 2015-2020 period. This means that the size of the bank's capital will not affect the bank's ROA
- 3) NPF has a significant effect on ROA at BPRS in West Sumatra for the 2015-2020 period. This means that the higher the NPF will decrease the profitability value and vice versa, the lower the NPF will increase the bank's profitability.
- 4) FDR has no significant effect on ROA at BPRS in West Sumatra for the 2015-2020 period. This means that the size of the FDR ratio or the size of the distribution of financing to the public will not affect the profitability (ROA) of banks.
- 5) FDR was not able to mediate the relationship between TPF and ROA. This means that the indirect effect of TPF on profitability cannot be mediated by FDR.
- 6) FDR is able to mediate the relationship between CAR and ROA. This means that the indirect effect of CAR on profitability can be mediated by FDR.
- 7) FDR was not able to mediate the relationship between NPF and ROA. This means that the indirect effect of NPF on profitability cannot be mediated by FDR

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