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The Influence of ROA, ROE, FDR, and BOPO on Capital Adequacy in Sharia Commercial Banks in Indonesia 2018- 2022

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ABSTRACT

A bank health assessment is needed to find out whether the bank's condition is unhealthy, Company performance can take appropriate steps to handle it. The choice of CAR (Capital Adequacy Ratio) as the dependent variable is because according to Bank Indonesia, the Capital Adequacy Ratio is the most important indicator in maintaining the level of bank health. This research aims to analyze the influence of ROA, ROE, FDR, BOPO and inflation on capital adequacy as measured by the Capital Adequacy Ratio (CAR) in Sharia Commercial Banks in Indonesia. The data used is secondary data and the method used is multiple linear regression analysis using the SPSS version 27 program to obtain results regarding the relationship between one variable and another. The sampling method used in this research is purposive sampling with the research sample consisting of 10 Sharia Commercial Banks in Indonesia for 5 periods from 2018-2022. The analysis results show that ROA has a effect on CAR, ROE has effect on CAR, FDR has a effect on CAR, and BOPO has no effect on CAR.

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ABSTRAK

Penilaian kesehatan bank diperlukan untuk mengetahui apakah kondisi bank tersebut tidak sehat, kinerja Perusahaan dapat mengambil langkah yang tepat untuk menanganinya. Dipilihnya CAR (Capital Adequacy Ratio) sebagai variabel dependen karena menurut Bank Indonesia, Capital Adequacy Ratio merupakan indikator terpenting dalam menjaga tingkat kesehatan bank. Penelitian ini bertujuan untuk menganalisis pengaruh ROA, ROE, FDR, BOPO dan inflasi terhadap kecukupan modal yang diukur dengan Capital Adequacy Ratio (CAR) pada Bank Umum Syariah di Indonesia. Data yang digunakan adalah data sekunder dan metode yang digunakan adalah analisis regresi linier berganda dengan menggunakan program SPSS versi 27 untuk memperoleh hasil mengenai hubungan antara variabel yang satu dengan variabel yang lain. Metode pengambilan sampel yang digunakan dalam penelitian ini adalah purposive sampling dengan sampel penelitian terdiri dari 10 Bank Umum Syariah di Indonesia selama 5 periode dari tahun 2018-2022. Hasil analisis menunjukkan bahwa ROA berpengaruh terhadap CAR, ROE berpengaruh terhadap CAR, FDR berpengaruh terhadap CAR, dan BOPO tidak berpengaruh terhadap CAR

1. Introduction

People in developed and developing countries really need banks as a place to carry out their financial transactions. They consider banks to be safe financial institutions in carrying out various kinds of financial activities. Financial activities that are often carried out by people in developed and developing countries include the activities of storing and distributing funds. According to Banking Law Number 10 of 1998, what is meant by a bank is a business entity that collects funds from the public in the form of savings and channels them back to the community in the form of credit and/or other forms in order to improve the standard of living of many people.

Tabel 1. Data on Average Capital Adequacy Ratio (CAR) in Sharia Commercial Banks 2018–2022

BANK	**YEAR (Percent)**				
	2018	**2019**	**2020**	**2021**	**2022**
Panin Dubai Syariah	23,15	14,46	31,43	25,81	22,71
Aladin Syariah	53,07	41,84	49,09	40,50	59,28
BCA Syariah	24,30	38,30	45,30	41,40	36,70
Mega Syariah	20,54	19,96	24,15	25,59	26,99
Bukopin Syariah	19,65	15,99	22,22	23,74	19,49
BTPN Syariah	40,92	44,57	49,44	58,10	52,00
Muamalat	12,34	12,42	15,21	23,76	32,70
Maybank Syariah Indonesia	19,04	21,38	24,31	27,10	26,65
Victoria Syariah	22,07	19,44	24,60	33,21	59,68
Jabar Banten Syariah	20,39	20,59	24,14	23,47	22,11

Source: Sharia Banking Financial Report

Banks play an important role in the economy of both developed and developing countries. Banks act as intermediary institutions that collect funds from the public and channel them back in the form of credit or financing. One important indicator in maintaining bank health is capital adequacy, which is measured by the Capital Adequacy Ratio (CAR).

According to Bank Indonesia, CAR is the most important indicator in maintaining a bank's health level. The higher the CAR, the healthier the condition of a bank. Therefore, a bank health assessment is needed to find out whether the bank's condition is unhealthy, sick or healthy so that the company can take appropriate steps to handle it.

This research focuses on Islamic Commercial Banks in Indonesia, using data from 2018 to 2022, to evaluate the influence of Return on Assets (ROA), Return on Equity (ROE), Financing to Deposit Ratio (FDR), and Operational Costs on Operating Income (BOPO) to the Capital Adequacy Ratio (CAR). The selection of independent variables is based on previous studies which show a significant influence on CAR.

2. Research Methods

This research uses a quantitative approach with secondary data taken from the financial reports of Sharia Commercial Banks listed on the Indonesia

Stock Exchange. The analysis technique used is multiple linear regression with the help of SPSS version 27 software. The analysis techniques used in this research are descriptive statistical analysis, classical assumption testing, multiple linear regression analysis, and hypothesis testing (Ghozali, 2018). The population in this research is Sharia Commercial Banks listed on the Indonesia Stock Exchange for the 2018-2022 period. The sample using 10 banks were obtained as research samples for 5 years. The following is a list of banks used as samples in the research:

Table 2. List of Research Sample Companies

No	Name of Bank
1	Bank Panin Dubai Syariah
2	Bank Aladin Syariah
3	BCA Syariah
4	Bank Mega Syariah
5	Bank Bukopin Syariah
6	Bank BTPN Syariah
7	Bank Muamalat
8	Bank Maybank Syariah Indonesia
9	Bank Victoria Syariah
10	Bank Jabar Banten Syariah

Sumber: www.idx.co.id, 2023.

Capital Adequacy Ratio (CAR)

CAR is a ratio that pays attention to the extent to which all bank assets that contain risk (credit, investments, securities, claims on other banks) are financed from the bank's own capital funds in addition to obtaining funds from sources outside the bank (Anwar, 2023). In other words, CAR is a bank ratio to measure the adequacy of capital a bank has to support assets that contain or generate risk (Indriyanti, 2022). CAR can be calculated by comparing capital to risk-weighted assets (Chavia, 2022.

CAR = (Risk Weighted Capital/Assets) x 100%

Return on Assets (ROA)

Return on Assets (ROA) is a ratio to measure bank management in managing assets to obtain overall profits. This ratio is often also referred to as Return on Investment. The smaller (lower) this ratio is, the worse it is, and vice versa. This means that this ratio is used to measure the effectiveness of the entire company (Taufik, 2022). ROA can be calculated using the following formula:

ROA = Net Profit: Total Assets.

Return on Equity (ROE)

Return on Equity (ROE) is a ratio commonly used to measure bank financial performance. This ratio functions to measure the ability of bank management to manage existing capital to obtain net income (Siska, 2020). To measure the bank's ability to obtain profits based on the interests of the owner, the Return on Equity (ROE) ratio is used and the calculation formula is as follows (Taufik, 2022):

ROE: Return On Equity (ROE) = Net Profit after Tax / Shareholders' Equity.

Financing to Deposit (FDR)

In sharia banking, the FDR used is the term financing and is not known as credit. FDR is a liquidity ratio that represents the two main activities of a bank, namely collecting funds and distributing these funds to people who need them (financing). Fund distribution or financing activities are the main source of income for sharia banks. The amount of financing distributed is influenced by the amount of third party funds collected. The more funds collected, the more financing that can be distributed (Indriyani, 2022). The FDR formula is as follows (Indriyani, 2022):

FDR = financing x 100%

Costumer Custodial Fund

Operational Costs to Operating Income (BOPO)

BOPO is the ratio of operational costs to operating income. BOPO according to the financial dictionary is a group of ratios that measure the operational efficiency and effectiveness of a company by comparing one to another. This ratio is used to measure the level of efficiency and ability of a bank in carrying out its operational activities, especially credit. The higher this ratio indicates the more inefficient the bank's operational costs are. The lower the ratio of Operational Costs to Operational Income (BOPO), the better the performance of the bank's management, because it is more efficient in using the company's existing resources. BOPO can be calculated using the following formula (Indriyani, 2022):

$$\text{BOPO} = \frac{\textit{Operational Expenses}}{\textit{Operating Income}} \times 100\%$$

The dependent variable in this research is the Capital Adequacy Ratio (CAR), while the independent variables are Return on Assets (ROA), Return on Equity (ROE), Financing to Deposit Ratio (FDR), and Operational Costs to Operating Income (BOPO).

Before carrying out regression analysis, a classic assumption test is carried out consisting of a normality test, heteroscedasticity test, multicollinearity test and autocorrelation test to ensure that the data meets the requirements. Next, descriptive statistical analysis and multiple linear regression were used to test the research hypothesis

3. Results and Discussions

Description of Research Objects

The object of this research is sharia commercial banks listed on the Indonesia Stock Exchange (BEI) in 2018-2022. By using a purposive sampling method using certain criteria. The list of companies used in this research is as follows:

Tabel 3. Criteria of sample

No	Criteria of sample	Amount
1	Sharia Commercial Banks (BUS) listed on the Indonesia Stock Exchange (BEI) for the 2018-2022 period	13
2	Islamic commercial banks that do not publish financial reports and financial ratios which are used as variables to be studied for the 2018-2022 period	(3)
	Total	10

Source: Secondary data processed in 2023.

The data analysis technique used in this research is multiple linear regression analysis. In general, regression analysis is basically a study of the dependence of a dependent (dependent) variable on one or more independent variables (explanatory or independent variables), with the aim of estimating and predicting the population average or average value of the dependent variable based on the value of the independent variable. what is known (Ghozali, 2018). So regression is a tool used to measure the influence of the independent variable on the dependent variable. The results of multiple linear regression analysis between Capital Adequacy Ratio (Y), with Return on Assets (X1), Return on Equity (X2), Financing to Deposit Ratio (X3), and Operational Costs to Operational Income (X4) which have been processed using SPSS version 27 as follows:

Table 4. Results of Multiple Linear Regression Analysis

Coefficients[a]						
Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	T	Sig.
1	(Constant)	,062	,028		2,941	,005
	ROA	,027	,020	,431	1,912	,006
	ROE	,056	,026	,264	2,605	,016
	FDR	-,264	,082	,259	-2,581	,044
	BOPO	-,042	,020	-,352	-2,073	,064

Source: secondary data processed with SPSS 27, 2023

Based on table 4 above, the multiple linear regression analysis model equation obtained is as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$$

Y = 0,062+0,027X1+ 0,056X2-0,264X3-0,042X4+e

Based on table 4 above, the equation of the multiple linear regression model obtained can be concluded that the constant has a positive value, namely 0.062. A positive sign means that it shows a unidirectional influence between the independent variable and the dependent variable. This shows that all independent variables (ROA, ROE, FDR, and BOPO) have a value of zero (0) percent or have not changed. So the CAR value is 0.052. The regression coefficient value for the Total Return on Assets variable has a positive value of 0.027. This shows that if Return on Assets increases by one (1) percent, then the Capital Adequacy Ratio will increase by 0.027 assuming other independent variables are considered constant.

A positive sign means that it shows a unidirectional influence between the independent variable and the dependent variable. The regression coefficient value for the Total Return on Equity variable has a positive value of 0.056. This shows that if Return on Equity increases by one (1) percent, then the Capital Adequacy Ratio will increase by 0.056 assuming other independent variables are considered constant. A positive sign means that it shows a unidirectional influence between the independent variable and the dependent variable. The coefficient value of the Financing to Deposit Ratio variable shows a negative number of -0.264.

The regression value is negative, which means that there is a unidirectional relationship between the Financing to Deposit Ratio variable and the Capital Adequacy Ratio. This means that if the Financing to Deposit Ratio variable increases by one (1) percent, then on the other hand the Capital Adequacy Ratio variable decreases by -0.264. Assuming that other variables remain constant. The coefficient value of the BOPO variable shows a negative number -0.042. The regression value is negative, which means that there is a unidirectional relationship between the BOPO variable and the Capital Adequacy Ratio. This means that if the BOPO variable increases by one (1) percent, then on the other hand the Capital Adequacy Ratio variable decreases by 0.042. Assuming that other variables remain constant.

Significant Individual Parameter Test (t Test)

The t statistical test basically shows how far the influence of an explanatory or independent variable individually is in explaining variations in the dependent variable (Ghozali, 2016). In testing, the t test is used to partially test the influence of Return on Assets, Return on Equity, Financing to Deposit Ratio, and BOPO on the Capital Adequacy Ratio. The total data is 50 data on 10 Sharia Commercial Banks on the Indonesia Stock Exchange for the 2018-2022 period. The following table shows the results of the t statistical test:

Table 5. Partial Test Results (t Test)

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	,062	,028		2,941	,005
	ROA	,027	,020	,431	1,912	,006
	ROE	,056	,026	,264	2,605	,016
	FDR	-,264	,082	,259	-2,581	,044
	BOPO	-,042	,020	-,352	-2,073	,064

Source: secondary data processed with SPSS 27, 2023

On table 5 above, it can be explained as follows:

Hypothesis 1 (H1) testing results

From table 5 above, it can be seen that the results of multiple regression calculations show that the calculated t value is 1.912 which is greater than t table 1.679 and the probability number is 0.006 which is less than 0.05, meaning that the variable Return on Assets (ROA) has a positive and significant effect on the Capital Adequacy Ratio (CAR) partially. Thus, hypothesis one (H1) which states that the Return on Assets (ROA) variable has a positive and significant effect on the Capital Adequacy Ratio (CAR), is accepted.

Hypothesis 2 (H2) testing results

From table 5 above, it can be seen that the results of multiple regression calculations show that the calculated t value is 2.605 which is greater than the t table of 1.679 and the probability number is 0.016 which is less than 0.05, meaning that the Return on Equity (ROE) variable has a positive and significant effect on the Capital Adequacy Ratio (CAR) partially. Thus, hypothesis one (H2) which states that the Return on Equity (ROE) variable has a positive and significant effect on the Capital Adequacy Ratio (CAR), is accepted.

Hypothesis 3 (H3) testing results

From table 5 above, it can be seen that the results of multiple regression calculations show that the calculated t value is -2.605, which is greater than the t table of 1.679 and the probability number is 0.044, which is smaller than 0.05, meaning that the Financing to Deposit Ratio (FDR) variable has a significant and influential effect on the Capital Adequacy Ratio. (CAR) partially. Thus, hypothesis one (H3) which states that the Financing to Deposit Ratio (FDR) variable has a negative and significant effect on the Capital Adequacy Ratio (CAR), is accepted.

Hypothesis 4 (H4) testing results

From table 5 above, it can be seen that the results of multiple regression calculations show that the calculated t value is -2.073 which is greater than the t table of 1.679 and the probability number is 0.064 which is greater than 0.05, meaning that the BOPO variable has no effect and is not significant on the Capital Adequacy Ratio (CAR) as a whole. partial. Thus, hypothesis one (H4), which states that the BOPO variable has a negative and insignificant effect on the Capital Adequacy Ratio (CAR), is rejected.

Simultaneous Test (F Test)

The F statistical test is carried out with the aim of showing that all independent variables included in the model have a joint influence on the dependent variable (Ghozali, 2018:98). The testing criteria use a significance level of 0.05. If the significance value is 0.05, it means the research model is not suitable for use. The results of the simultaneous F test calculation can be seen in the following table:

Table 6. Simultaneous Test Results (F Test)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2,131	4	,533	4,863	,002b
	Residual	4,929	45	,110		
	Total	7,059	49			

Source: secondary data processed with SPSS 27, 2023

Based on table 6 above, it can be seen that the significant value of the variables Return on Assets, Return on Equity, Financing to Deposit Ratio, and Operational Costs with Operational Income to Capital Adequacy Ratio is 0.002, which is smaller than 0.05. This shows that there is an influence of Return on Assets, Return on Equity, Financing to Deposit Ratio, and Operational Costs with Operational Income on the Capital Adequacy Ratio together, meaning that this research model can be said to be feasible.

4. Conclusion

Based on the analysis results, it can be concluded that ROA has a positive and significant effect on CAR. The higher the ROA, the greater the bank's ability to increase its capital through profits. ROE has a positive and significant effect on CAR. The extent of a bank's ability to generate profits by utilizing bank equity influences a bank's capital. FDR has a negative and significant effect on CAR. The higher the FDR, the lower the bank's liquidity level, which has an impact on reducing capital adequacy. BOPO has no significant effect on CAR. Operational efficiency does not necessarily have a direct impact on bank capital adequacy. Simultaneously, ROA, ROE, FDR, and BOPO have a significant effect on CAR.

References

Aulia, Farashita dan Prasetiono. (2016). Pengaruh CAR, FDR, NPF dan BOPO Terhadap Profitabilitas (Return on Equity), (Studi Empiris pada Bank Umum Syariah di Indonesia Periode Tahun 2009-2013). Diponegoro Journal of Management: Volume 5, Nomor 1, Tahun 2016, Halaman 1-10.

Amarsya, Emilia Trisna. (2024). Pengaruh ROA Terhadap FDR Pada Laporan Keuangan Bank Muamalat Tahun 2018 – 2022. COSMOS: Jurnal Ilmu Pendidikan, Ekonomi dan Teknologi, Vol. 1 No.4.

Ari. (2023, Desember). Pengaruh Return on Assets Dan Return on Equity Terhadap Capital Adequacy Ratio Di PT. Bank Tabungan Pensiunan Nasional Tbk. Periode 2014-2022. Jurnal Nuansa: Publikasi Ilmu Manajemen dan Ekonomi Syariah, 4.
Aziz, I. G. (2020). Manajemen Keuangan dan Bisnis: Teori dan Aplikasi. Jakarta: Gramedia.
Basnawati, S. R. (2022). Analisis Faktor - Faktor yang Mempengaruhi Profitabilitas Pada Bank Umum Syariah di Indonesia. Jurnal Economina, 1, 2.
Dwintama, F. P. (2021, Juli). Pengaruh NPF, CAR, dan FDR Terhadap Profitabilitas Pada Bank Umum Syariah di Indonesia Periode 2016 - 2020. Jurnal Ilmiah Akuntansi, Manajemen dan Ekonomi Islam (JAM-EKIS), 4, 412.
Idrus, A. (2018). Pengaruh Faktor Internal Dan Eksternal Terhadap Return On Equity (ROE). Misykat Al-Anwar Jurnal Kajian Islam Dan Masyarakat, 29, 79-98.
Bursa Efek Indonesia (2023, Januari 02). Laporan Keuangan Tahunan 2018, 2019, 2020, 2021, dan 2022. Diakses pada November 05, 2023, dari https://www.idx.co.id/id
Irham, F. (2013). Analisis Laporan Keuangan, Cetakan ketiga. Bandung: Alfabeta.
Kasmir. (2019). Analisis Laporan Keuangan. Bekasi: Rajawali Pers.
Laurance. (2019). Analisis Pengaruh Rentabilitas terhadap Rasio Kecukupan Modal pada
Bank Tabungan Pensiunan Nasional. Media Riset Bisnis dan Manajemen, 7.
Lufiandra, Putri dan Syafri. (2023). Pengaruh CAR, NPF, FDR, dan BOPO Terhadap Profitabilitas (ROA) Pada Bank Umum Syariah (Studi Kasus: Bank Syariah Yang Terdaftar di OJK 2018 – 2022). Jurnal Ekonomi Trisakti: Vol 3 No.2
Mahendra, T. R. (2023). Pengaruh CAR, ROA, ROE, dan NPF terhadap Total Aset Perbankan Syariah di Bahrain, Arab Saudi, Brunei Darussalam, Malaysia, dan Indonesia Tahun 2014-2021. Jurnal Ilmiah Ekonomi Islam, 9(02), 5.
Oktavia, C. (2022). Analisis Rasio Profitabilitas, Likuiditas, dan Solvabilitas Pada PT. Bank Mandiri (PERSERO) Tbk. Jurnal Tugas Akhir Mahasiswa Akuntansi POLTEKBA (JMAP), 2, 6.
Sadi, M. (2018). Konsep Hukum Perbankan Syariah. Malang: Setara Pers.
Samryn. (2015). Pengantar Akuntansi, Buku 1. Jakarta: PT RajaGrafindo.
Sarifah, A. (2022). Pengaruh Rentabilitas dan Likuiditas Terhadap Rasio Kecukupan Modal Pada Bank Bumn yang Go Public. Borneo Student Research, 1, 4.
Siska. (2020). Pengaruh ROA, ROE, FDR, BOPO, dan Inflasi Terhadap Kecukupan Modal Bank Umum Syariah Tahun 2011 – 2015. 5.

Suhendro, D. (2019). Analisis Return on Asset (Roa), Return on Equity (Roe), Return On Capital Employed (Roce) Terhadap Capital Adequacy Ratio (Car) Pada Perbankan Syariah Indonesia. Jurnal Masharif al-Syariah: Jurnal Ekonomi dan Perbankan, 6, 18-25.

Suliyanto. (2011). Ekonometrika Terapan Teori dan Aplikasi dengan SPSS. Yogyakarta: CV Andi Offside. Yogyakarta: CV Andi Offside.

Widiasningrum. (2018). Analisis Pengaruh ROA, ROE, BOPO, dan Suku Bunga Terhadap Tingkat Bagi Hasil Deposito Mudharabah Pada Perbankan Syariah. 5.